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ORIGINAL ARTICLES.

SOME RECENT ADVANCES IN THE TREATMENT OF ATROPHIC RHINITIS.

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THE intranasal disease characterized by progressive interstitial destruction of tissue, by the formation of deep erosions, the loss of ciliated epithelium, and the many sequelæ of nasal sepsis, is still the opprobrium of the rhinologist. Recent changes in nasal therapeutics have however added greatly to our controlling power in this disease, and results can now be obtained, which, in the writer's experience, were quite impossible a few years past. In a paper published in the MEDICAL NEWS[1] more than nine years ago, the present writer discussed certain methods which were new, and which had yielded good results in his hands, but the prognosis given was "the best that can be done in advanced cases is to palliate or improve, and cleansing measures must be continued at intervals throughout the life of the individual to insure no active return of the disease." At the present time, although no means have been found of replacing lost turbinated tissue, much greater control can be gained over the cirrhotic process, and in early cases a large amount of permanent comfort for the patient can be secured. Perfect cleansing ranks first in importance in the treatment of atrophic catarrh, but it must be secured by methods which are not irritating in character. It should be remembered that atrophic rhinitis is characterized by migration of leucocytes, their organization into cicatricial tissue, and the subsequent contraction of the same; by the progressive conversion of ciliated epithelium into that of squamous type, and by the general loss of procreative cell-power.

Any form of cleansing or other treatment, therefore, which tends to produce any of the changes is the reverse of beneficial. The nasal douche as ordinarily used is nearly useless, and exceedingly apt to cause disease of the ears and accessary nasal sinuses, and the various forms of nasal syringe so frequently recommended nearly all cause much traumatism, except in highly trained and judicious hands. The best means at our disposal for clearing the nose of crusts is by the preliminary use of hydrogen peroxid. It is the habit of the writer to use about one dram of the three-per cent. solution in each nostril, employing a glass atomizer. The immediate effect is to fill the nasal cavity with a mass of bubbles, which cause the crusts to become so friable that their removal by atomization is an easy matter. A suitable instrument, throwing a coarse, abundant spray, and a pressure of from twenty to thirty pounds, is required for the cleansing process. The formula used is unimportant, so long as it be alkaline and antiseptic; the writer generally uses solutions of boric acid, sodium borate, and sodium chlorid. The spraying must be continued until every particle of exudate is removed, and the entire intranasal membrane is cleared, many minutes are frequently required to obtain this result, crust after crust being removed in turn by directing the nozzle of the atomizer against it. All rough measures, such as lifting off the dry crusts with forceps, or their forcible removal by the syringe, invariably leave extensive erosions, the tendency of which is greatly to increase the epithelial desquamation, with corresponding injury to the patient. Should the post-nasal space be so blocked by crusts that they cannot be removed by spraying through the anterior nares, the post-nasal syringe should be employed. The best instrument is a small Eustachian catheter mounted upon a syringe of about three drams capacity. This is gently introduced behind the palate, and the medicament injected vertically with some force.

After absolute cleansing has been secured, the most important measure at our command in the therapeutic management of atrophic rhinitis is the use of massage. Much absurd literature has been written about this procedure, several writers have given the number of strokes per minute, which, in their opinion, was absolutely necessary to secure a favorable result, and very elaborate directions have been given regarding the instrument used, etc. The principle, however, is simply one of mechanical vascular and cellular stimulation, which must never be carried to the point of causing inflammatory changes. Perhaps the best method is to wrap an aural cotton-carrier with a firm, fusiform tuft of cotton, about one

[1] MEDICAL NEWS, April 2, 1887.

inch in length, by one-sixteenth in diameter. This, having been well oiled, is introduced into the nasal chamber and brought in rather firm contact with the mucous membrane, the whole area is then rapidly and systematically rubbed, great care being taken not to bruise or hurt the parts in any way. Hemorrhage is always an unfortunate accident, as the resultant clot is difficult to remove, and invariably acts as an irritant. Massage may be continued for from three to six minutes, varying with the tolerance of the patient. Slight reaction usually occurs, the membrane becoming much redder. Medical stimulants in the form of ointments are conveniently used along with the massage, europhen in the form of a five- or ten-per-cent. ointment, cinnamon-oil from five to fifteen per cent. in albolene, and oil-solutions of thymol, are the formulæ giving most satisfaction. Any one of these may be used, the cotton masseur being dipped into the oil, which is thus applied with much thoroughness to the whole atrophic area.

Another very valuable method of stimulation is the use of the faradic current; this is best used by means of a long nasal electrode which can be carried back through the nose to the posterior pharyngeal wall; the positive pole should be used in the nasal cavity, the negative—a large sponge-rheophore—being held against the neck, or in the hand of the patient. The *séance* may occupy from five to ten minutes, real discomfort being always a signal for its discontinuance. I formerly used this method extensively, but now use nasal massage in preference to it, as the latter is a more manageable, less unpleasant, and more generally useful procedure.

Stimulation by means of cotton tents introduced into the nose and allowed to remain one or more days (Gottstein's method), has never given good results in the hands of the writer. They certainly seem to increase the amount of the epithelial desquamation, and unless applied with great care and frequently renewed, tend also to cause inflammatory changes and increased sepsis. As a rule, they are greatly disliked by patients, and have been abandoned in my practice. It may be stated that all persistent mechanical pressure within the nose tends to remove ciliated epithelium, and is consequently exceedingly prejudicial in atrophic rhinitis.

Among drugs which have given good results as stimulants in the treatment of this disease, thymol, in my opinion, still continues in the first rank; it may be used in watery solution with alcohol and glycerin, but is much better employed dissolved in one of the petroleum-oils, albolene, glymol, or benzoinol may be used, the thymol being in the proportion of from three to ten grains per ounce. The former strength can be borne by most patients, the latter only by a few in whom tolerance has been established by much previous treatment. Frontal headache, lachrymation, or a severe stinging sensation in the nose should always be regarded as indications for the use of a weaker solution. Numerous drugs may be usefully employed in combination with thymol, among them menthol, pine-needle-oil, and eucalyptus, in the strength of from one to three per cent. Sanguinaria and galanga were once much used as stimulants in this disease, but they are exceedingly apt to act as severe irritants, and owing to this and their unpleasant taste have been largely abandoned. Next to thymol, europhen has given the greatest satisfaction in the writer's hands; it may be used in the form of an ointment, as above suggested, or of a dusting-powder in combination with stearate of zinc; or in advanced cases, where marked stimulation is required, the pure, powdered europhen may be used. Although slightly less efficient than thymol in the average case, it suits some cases better, is always less painful, and its use may be regarded as one of the distinct advances in nasal therapeutics. Aristol, iodoform, and allied compounds are also a benefit, but have more disadvantages than the one first named. Cinnamon-oil has been shown to be the most decidedly antiseptic of the volatile oils, and is particularly valuable in conditions of nasal and pharyngeal sepsis; it may be used in the form of a spray, from three to ten per cent. being added to the ounce of albolene. It appears to be entirely unirritating, produces a grateful feeling in the nose, and its odor is pleasant and not persistent. Whichever oil-spray be employed, it is essential that it be thoroughly applied to a perfectly clean mucous membrane, a suitable apparatus, and a pressure of at least twenty-five pounds per inch are essential.

Stimulation may be easily overdone in cirrhotic catarrh by drugs as by mechanical means. MacDonald observes that "it is somewhat doubtful whether we are any more justified in stimulating the nasal mucous membrane in atrophic rhinitis than a cirrhotic liver"—the warning and the pathological suggestion contained in this sentence are both exceedingly valuable. It cannot too often be reiterated that all violent measures in this disease defeat themselves, by causing the very pathological processes which they are intended to cure. Purely surgical measures have but a limited value in cirrhotic catarrh; dead bone must be carefully removed, the minimum of

disturbance of surrounding tissues being carefully observed. Nasal spurs, or similar obstructions, should not be operated upon, and turbinated tissue should not be removed, except under cases of absolute necessity, the constant tendency to cicatrization and contraction in this disease never being lost sight of. I have seen several cases in which extensive intranasal operations had appeared to light up the atrophic process, and all operations on the turbinated tissues are to be regarded as at least unfortunate necessities. Jonathan Wright[1] has had a similar experience, and forcibly points out how in vascular engorgement cauterization or other intranasal operation does not restore the efficiency of the damaged muscular apparatus, but by the formation of a scar favors the tendency to fibrosis. The use of skin-grafts as suggested by Laborderie, at first sight, appears to be one of the most valuable surgical measures that have been brought forward in atrophic rhinitis, the very essential of the disease being the permanent loss of epithelium. Unfortunately, the only available grafts which have been suggested are those which are covered by squamous epithelium, such as the intradigital membrane of the frog, whereas what is wanted is a membrane covered with columnar ciliated epithelium. The writer's efforts to graft such a membrane have all been total failures, and it is doubtful whether it is possible to obtain this very desirable result. Laborderie claims that nearly half the number of grafts made from the skin of the frog take effect, and advises the use of from ten to twenty grafts in all advanced ulcerative cases. Even if this admirable result could be obtained by the average operator, a surface covered with pavement-cells, and incapable of ridding itself of adherent mucus, would be the effect, and the patient would be no better off than before.

The internal treatment of cirrhotic catarrh is not satisfactory; the only drug which can be considered to have the slightest specific effect is iodin. This may be given in the form of iron iodid or of potassium iodid, and certainly, in some cases, appears to lessen the tendency to inspiration and to exert a beneficial influence on the course of the disease. Tonics are, of course, needed in many cases, and hygienic measures are naturally of the first importance. Climatic change appears to arrest the disease in a certain proportion of cases, and, when possible, should be tried, especially after local treatment appears no longer beneficial.

Perhaps the most serious danger of advanced cases of nasal atrophy and suppuration is aural complications. A large proportion of cases have recurrent attacks of acute Eustachian salpingitis, a certain proportion of these going on to suppurative disease of the middle ear and perforation of the membrana tympani. Especially is this the case where the nasal douche, snuffing fluid from the hand, or similar measures in which hydrostatic pressure is brought to bear, have been employed. Colonies of streptococci are thus easily forced into the Eustachian tubes, with the result of setting up suppurative conditions extremely prejudicial to the welfare of the patient. With a view to the prevention of these complications, cleansing measures should always be by some such method as has been advised. Patients should also be carefully warned to avoid forcibly blowing the nose, as in this way the Eustachian tubes are also frequently infected. The use of Politzer's inflation is even more dangerous, and should never be employed in cases of cirrhotic catarrh until absolute cleansing and antisepsis of the nasal cavities have been carried out. If suppurative salpingitis is already established, the most satisfactory mode of treatment is by means of the Eustachian syringe-catheter. This should be introduced through the nose, and the folds of the tube carefully washed out with a warm, mild, antiseptic formula, boric acid and salt being commonly used by the writer. Treatment should be continued daily for some time, the tympanum being meanwhile *carefully let alone*, unless already actually diseased. If the middle ear be already involved, antiseptic irrigation and, if necessary, an early paracentesis should be performed. Recurrent acute attacks of suppuration almost certainly result, sooner or later, in thickening of the drum and ankylosis of the ossicles in all neglected cases, and deafness and tinnitus aurium are almost the rule in such. It is believed that by the faithful use of some of the newer methods of treatment which have been above suggested, better results can now be obtained in cirrhotic rhinitis than could be secured by any of the older forms. The prognosis of this dread disease is still, however, a very gloomy one, moderate improvement being all that can be hoped for in any advanced case; but great comfort, freedom from odor, arrest of the disease, and avoidance of complications can all be secured by patient treatment extending over not a few weeks, but many months. What, above all else, the rhinologist needs is some method of controlling fibrosis—the fibroblastic process. The nearer we come to securing this, the more will our chronic cases improve.

[1] *Amer. Jour. Med. Sciences*, May, 1895.

EXOPHTHALMIC GOITER TREATED BY GALVANISM, WITH REPORT OF CASES.

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DURING the past five years I have had my attention particularly called to the study of that obscure and little-understood disease, exophthalmic goiter. From the frequency with which I have met the disease, I am led to think that it is commoner than formerly, and consequently should receive our attention. Writers on the subject since have only confirmed the original observations made by Dr. Robert J. Graves, *vis.*, that the rapid pulse, exophthalmos, and nervous symptoms often precede the development of goiter.

Though there are certain districts where goiter is endemic, I am not aware that the disease now under consideration is prevalent there; it more often appears in places where true goiter is comparatively rare. It is more common between the ages of twenty and thirty, though occasionally seen in those younger or older. Judging from the observations of many writers, it would seem to attack eighty per cent. more females than males. In eighteen years' practice I have seen but one case in the male. It has been the opinion of observers that the disease is more dangerous and rapidly fatal in men than in women. It has been my observation that the disease develops rapidly; that there is generally a history of some preceding cause of debility, as continued hemorrhage and diarrhea, excessive fatigue from overwork, mental or physical. There are many cases on record which have developed suddenly after extreme mental excitement, exertion, or shock.

In my practice I have had but one death from Graves' disease, and was unable to get consent of relatives to an autopsy. Increased vascularity, slight hemorrhages, and abscesses have been reported; it has also been shown that division of the restiform body gives rise to symptoms closely resembling those of exophthalmic goiter. The most plausible theory, and that accepted by a majority of the recent writers, is the one which attributes the disease to a primary lesion of the thyroid gland. The symptoms of thyroidism bear a very close resemblance to those of exophthalmic goiter, as emaciation, sweating, rapid pulse, tremors, and exophthalmos have all been observed. The prominence of the eyes, I believe, is due to a dilated condition of the blood-vessels; there is no marked deposit of intra-orbital fat; in fact, emaciation and anemia of the orbital region is the condition found.

Prognosis should be very guarded in well-marked cases. Little improvement has followed any treatment; while in mild cases some are restored to perfect health, others live for years, but are never strong, and are subject to frequent relapses. It has been my experience that the heart-tonics, such as digitalis, strophanthus, etc., do harm. During the past three years desiccated thyroids have been largely prescribed for the relief of all forms of goiter. I have prescribed them in four cases, with no other result than poisoning my patients, causing headaches and dizziness.

Thyroidectomy does not grow in favor with those who have resorted to the operation, and should be resorted to only in extreme cases.

Like many others, having had indifferent results from therapeutical agents used in this disease, I have of late given up dependence upon them, and resorted to electrotherapeutic treatment. For fifteen or twenty years past the treatment of exophthalmic goiter by the galvanic current has been generally growing in favor. I have found that the rules laid down by Cardew[1] for the administration of electricity produce satisfactory results, hence I have adhered to them, with some trifling changes: (1) Galvanism is superior to faradism; (2) weak currents are sufficient, two or three milliampères (I give more—ten or twenty); (3) each application should last six minutes; applications should be made two or three times a day. The anode should be placed on the back of the neck, over the seventh cervical vertebra; the cathode should be moved up and down the side of the neck, from the mastoid process along the course of the great nerves. I have also used it with the two poles pressed to either side of the goiter; also with the positive pole over the goiter, and the negative over the solar plexus, continuing the current about five or six minutes in each place. A nurse, or any competent person, with training, can administer the treatment, the doctor seeing the patient frequently. One's first experience is apt to be discouraging, as frequent relapses, from various causes, are sure to interrupt the recovery or improvement of the patient. The patients are neurotic, and susceptible to trifling impressions; these are cases where patience and perseverance, both on the part of the physician and patient, are usually rewarded by marked improvement in nearly all cases, the symptoms gradually disappearing. Cardew states, and I am willing to bear him out, "that we have in electricity an agent powerful for good in the great majority of cases of Graves' disease."

[1] London *Lancet*, July 4, 1892.

Such cases as fail to be benefited by it are, unfortunately, extremely unlikely to derive much benefit from any other therapeutical agent. It is cheaper than drugs, it can be left in the hands of the patient more safely than continued doses of digitalis and belladonna, and it can be continued a long time without doing harm, should it fail in doing good.

The following is a report of my cases:

CASE I.—February 3, 1893, girl, aged sixteen, student, had been ill two or three days with what her family thought to be la grippe. Just before my call her symptoms became alarming. I found a pale, slender girl, with large goiter and eyes that protruded nearly from their sockets; heart beating so tumultuously that the motion imparted to the chest-wall could be seen from across the room, and its sounds heard at some distance from the patient. The pulse was 160 and the temperature 106°; respirations, panting and rapid. Sedatives, belladonna, and cannabis indica were given, and cool sponge-bathing ordered; patient made no improvement, but, on the contrary, grew worse; temperature increased to 108°; she became delirious, and before midnight died from exhaustion induced by hyperpyrexia.

I was unable to get a good history of this case, as she had not been regularly under the care of any physician. She had suffered from nervous symptoms, goiter, and protruding eyes for two years before her death.

I was also unable to obtain consent of friends to an autopsy. This being the only fatal case I have seen, I report it to show what the symptoms are at the end of such a case.

CASE II.—August, 1893, Mary L., aged thirty unmarried, seamstress, was anemic and of slender build; parents living and healthy. Symptoms, goiter quite noticeable, heart rapid, but exophthalmos was not marked. Prescribed iron and manganese pills and began treating the patient at once with galvanic current, treating her for twenty minutes every second day. This patient made rapid improvement, and in two months was so well that she discontinued treatment. I have seen her once during the past year, when she informed me that her trouble never returned. Her health has been good since taking the treatment mentioned. This case I did not consider a serious one, and the patient was treated early, also taking a much-needed rest, which, no doubt, contributed largely to her prompt recovery. As she improved, menstruation, which had been absent for six months, returned.

CASE III.—Treated during the summer of 1894, Holland girl, aged eighteen, occupation a domestic. This patient, contrary to the usual rule, was not anemic, but had a good color and full habit; family history good.

The symptom which caused her to consult a physician was excessive sweating; her occupation exposed her to the heat of the kitchen, and her clothing was saturated all the time with perspiration, which emitted a sour and offensive odor. Other symptoms observed on examination were goiter and rapid pulse, most of the time as high as 120; menstruation scanty and irregular. Patient was treated by galvanism. Medicines given were potassium permanganate and belladonna; treatment continued for four months; goiter disappeared and heart-action reduced to 90; profuse sweating stopped and menstruation restored.

CASE IV.—January, 1896, boy ten years old, parents healthy, had suffered from a severe and protracted attack of rheumatism two years previously, which had left him with valvular affection of the heart. This was aggravated by a second attack, and within two weeks a goiter and exophthalmos became quite noticeable. The patient, being confined to the bed, received no electrical current, the treatment being directed wholly to relieving the rheumatism, which was accomplished in about four weeks. The boy still has a valvular murmur and goiter.

CASE V.—Miss L., aged twenty-five; occupation, public singer and instructor in music; family history good; became my patient during the summer of 1894. She gave the following history: During the preceding year, while a pupil in the Boston Conservatory of Music, she found she was suffering from bleeding piles, from which, at times, the hemorrhage was profuse; this having gone on for several months, she consulted Dr. H. O. Marcy of Boston, who took her into his private hospital and operated upon her successfully for their removal.

While in the hospital she began to develop exophthalmos, and within two months this symptom had changed her appearance so much that on her return to Michigan her friends sometimes failed to recognize her on the street.

I saw her soon after, and discovered that she also had goiter, a fact which had hitherto escaped her notice. Her condition gradually grew worse, rapid pulse, irregular menstruation, profuse sweating, and chronic diarrhea being her symptoms. In November she had become too weak to continue her singing and teaching, and by my advice tried complete rest in bed for several weeks, when, seeing no improvement, she was sent to a hospital, where she could have daily electrical treatment and massage. Improvement was rapid, and in about two months patient went home and treatment was discontinued until January of this year, when, finding her strength failing rapidly, she again came back for treatment. Galvanism and massage were used, and again marked improvement was noticed. Patient was treated once or twice a day for two months, and has gone home much improved. She has a twelve-cell battery, and will continue to apply galvanism as long as there is improvement.

During the last interval of treatment accurate measurements were taken, and the neck decreased in size one and one-half inches and the pulse from 140 to 90 and 100. Patient increased in strength, and, though not cured, was greatly improved.

In reporting the above cases I have not thought best to mention all the remedies that were tried and discarded, and have only mentioned those which were of apparent benefit, *viz.*, galvanism and massage. Three of the cases took desiccated thyroids faithfully, but in each of these the remedy did no good, but made the patient worse.

CASE VI.—September, 1895, Miss Z. R., aged eighteen, student; family history good. Physical signs were goiter and exophthalmos; on physical examination, the pulse was found to be small, 100 beats per minute, and greatly accelerated by the slightest exertion. Any considerable effort, as the climbing of one flight of stairs, would cause dyspnea and general distress; the sounds of the heart were not altered, except in the duration and force of the first sound. There was an absence of physical signs to prove the existence of any ordinary form of heart-disease; it was the ideal condition met with sometimes as a result of overwork producing cardiac exhaustion.

The symptoms described all developed within three weeks, and are of interest, because I believe the contributory cause was the abuse of the bicycle. The patient belongs to a family of bicyclers, her father being a dealer in that vehicle. It had been her custom to take many long and tiresome runs to adjoining towns, also to climb steep hills without dismounting, and she had repeatedly tired herself in this manner till forced to desist by the development of the symptoms described. In this patient the goiter, exophthalmos, and cardiac symptoms developed simultaneously. Rest in bed for several weeks, nutritious diet, and tonics improved the patient rapidly. She did not continue the treatment as long as she should have done, and at this time, though enjoying a fair degree of health, still has goiter and the eyes are not natural. She has not resumed the use of the wheel.

AN ADDRESS.

THE EVOLUTION OF THE SURGERY OF THE TWENTIETH CENTURY.[1]

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"The law is continuity, the watchword progress, the worker evolution."—PROFESSOR JOHN CHIENE, M.D.

IN availing myself of the privilege of appearing before you this evening, I desire to express my acknowledgments to the President for his invitation to deliver the anniversary address on behalf of the time-honored body of which I am proud to be an humble member, and to promise you, in return for the assurance which I see in your faces that you will listen with patience to what must be an old story to most of you, and, perhaps, will prove to be a prolix one to the remainder, that I shall endeavor so to clothe my subject as to make it appear more than a mere recital of facts, a catalog of events, a list of names, or a stilted declamation of so-called brilliant surgical exploits.

It is my purpose to consider particularly those events which stand out prominently before all others in their relation to the advances made in the science and art of surgery during the present century.

Material progress, however valuable, is but a symptom of mental development. This is just as true of medical science as of science in general, of which latter, in truth, we only just realize that we are but a part. We are but one of the spokes in the wheel of progress, and the conditions of development within our own workshop do not differ materially from those which obtain in the world of work at large. Little things, or what appear to be but insignificant events, gradually assume great importance, and that in direct proportion as they are of a character to enlarge our ideas and broaden our views; take, for example, the incident of the apple falling from the tree at the feet of Newton. The little ripple of thought thus set in motion in the pool of the philosopher's mind evolved into a wave, which gathered force as it rolled on until no man may say where its influence shall end. From this trifling incident arose a train of philosophic thought whose far-reaching effects have extended into the celestial spaces by establishing a physical law, to which the entire planetary system is as subject as the most insignificant object upon the earth's surface.

Looking back over the cultivated fields of the century, where the toilers of the soil of science have labored, how rich the harvest seems! And yet not all has even blossomed, much less come to fruition. The seed of original thought is being plenteously sown, and the graft of improvement implanted upon older stock. Here and there one discerns a constantly broadening area of exceptionally rich intellectual development, whose thought-nucleus glistens and sparkles like a jewel of great worth, as, indeed, it is. In the field of the healing art animal-experimentation, anesthesia, antisepsis and asepsis, and the discovery of the Röntgen rays, are to surgery what Newton's discovery of the law of the attraction of gravitation was to astronomy, Priestley and Scheele's discovery of oxygen to chemistry, and Darwin's discovery of the law of selection to evolution. From each of these, as a central idea, have grown out constantly widening furrow-lines of both intellectual evolution and physical development.

EXPERIMENTATION UPON LOWER ANIMALS.

The emblem "Truth" has ever been written upon the banner of the soldier of science. In the words of our lamented Loomis: "The scientific experimenter alone adds to our store of knowledge and power for good. He seeks for truth, and truth alone. However isolated

[1] Anniversary address delivered before the New York Academy of Medicine, November 19, 1896.

or unrelated his results may seem, he sees in each a potential value. The most insignificant discovery thus not only has its peculiar merit, but points the way to other hidden truths, although it may often be difficult to connect the several links in the long chain of progressive knowledge."[1] This sounds the key-note of all the important advances made in surgical science during the century. The spirit of original research is one of the most precious heritages of the healing art. But it is particularly during the past century that the results obtained from experimentation have been of the greatest value to surgery, although the intellectual evolution which led up to these results has been going on for centuries.

The fear of a fatal result from hemorrhage exercised a deterrent effect upon the operative efforts of the earlier surgeons, and at the present day this fear has a most healthful influence in preventing pretenders from performing surgical operations. Like a soldier under the enemy's fire, the surgeon, by his behavior in the presence of a severe hemorrhage, soon announces what qualities he possesses to entitle him to respect. As Senn has truly said: "Skilful treatment of hemorrhage is an infallible criterion of good surgery."[2] Loss of blood is the regular accompaniment of all major operations, and may complicate what at the outset was the most trivial procedure. It is no wonder, therefore, that the earliest practitioners of our art should have turned their attention to this most important subject; the evolution of the aseptic animal ligature is an outcome of this early demand for protection against the dangers of surgical hemorrhage.

The first application of the ligature for the prevention of hemorrhage was the result of an instinct rather than of reasoning. Naturally enough this instinct found its first expression in the arrest of the bleeding resulting from severing the umbilical cord in the new-born. The first account of such application dates back to 1500 B.C., although it is more than probable that this was the very first bit of technique that was developed in what was afterward to become the science and art of surgery, although writers in general allude to Hippocrates as the discoverer of the ligature. Through the centuries that have elapsed since the human maternal instinct first impelled the encircling of the navel-string by perhaps a twisted bit of bark or flax, or a lock of hair plucked from the mother's head, the history of the ligature has been the history of surgery.

It would be impossible to overestimate the force of the moral obligation which impels the surgeon to make sure, in every step of his work, that his actions bear upon their face the deep and lasting impress of honest effort. This obligation demands of him that all attainable knowledge bearing upon his work shall be at his command. Much of this knowledge must be obtained by experimentation, and every instinct of humanity demands that the subjects of this experimentation shall not be his fellow man, but rather those lower in the scale of animal life than himself. It was this moral obligation that impelled Hunter, near the close of the last century, to experiment upon dogs with the view of discovering the reasons for the frequency of secondary hemorrhage following the application of the ligature for the cure of aneurism, and it was this experimentation which developed the fact that injuries to arteries underwent ready repair when the vessels were healthy, and that it was only when diseased conditions were present, or arose, that ulceration and secondary hemorrhage took place. Hunter's enthusiasm was unbounded, and his love of truth so great that his death was directly due to a burst of righteous, yet passionate, indignation, when his word was doubted. He recognized that great benefits were to be derived from experimentation upon the lower animals. Not only were vast results obtained by his indefatigable labors; he furnished the stimulus for those who were to follow, and awakened a generous rivalry in other workers by his example. These followed up his work by confirming the results of his experiments, as well as instituting new ones.

At the beginning of the present century, much yet remained to be learned of the behavior of the blood-vessels under the application of the ligature. An alarming mortality from secondary hemorrhage confronted the surgeon. Preëxisting disease of the vessels could not account for this in all cases. In 1802 there appeared a most important publication by J. F. D. Jones, an English surgeon. Jones followed up the spirit of Hunter's inquiry by means of experiments upon animals, and made a most important addition to our knowledge of the processes employed by nature in suppressing hemorrhage from divided and punctured arteries. He showed that the effusion of lymph from the wound inflicted upon the artery by the ligature was sufficient, even if the ligature were removed at once, to obstruct the vessel; that the formation of a thrombus was not necessary to a complete obliteration of the latter; and, what is of great importance in the light of subsequent developments, he first directed attention to the deleterious effects of suppuration upon the processes of cicatrization in the blood-vessels.

Jones' momentary application of the ligature, however, proved to be unsafe, although its occasional success showed his experiments to be of the utmost importance. At this point the work was taken up by Travers (1813), who, still by means of experiments upon animals, made another stride in the march of progress. The same processes of intellectual evolution were still at work, and new light came from a repetition and extension of Jones' experiments. Travers substituted the temporary for the momentary ligature, and showed that the fears of the older surgeons concerning the dangers of too tightly constricting the artery, which led them to include bits of cork, or a roll of lint in the ligature, in order to prevent erosion of the vessel, were groundless. The great difficulty of determining the earliest possible moment when the ligature could be safely removed proved to be a complex problem, with all the unknown quantities concerned in the processes of healing entering into the consideration. To remove it too early meant disaster from hemorrhage, and to leave it on too long was but to invite suppuration, and possible ulceration of the vessel-wall. Moreover, the

[1] Presidential address of A. L. Loomis, M.D., LL.D., third meeting of the Congress of American Physicians.
[2] "Experimental Surgery."

manipulation necessary for the removal of the ligature seriously interfered with the prompt healing of the wound. In the following year (1814), Lawrence advocated cutting off the ends of the silk ligature, which theretofore had been left long and hanging in the wound to facilitate removal, and burying in the depths of the wound the loop of thread encircling the artery. The credit for this, however, has been claimed for Haire of Essex (1786). Following this came the use of animal ligatures—chamois-skin by Physick, catgut by Cooper, tendons by Paul Eve, human hair by Porta, and the successful use of metallic ligatures of various kinds by Levert. These latter were always cut short and allowed to remain permanently in the wound.

Slowly, but surely, the goal was being reached; but progress came exclusively along the line of accurate observation, and almost entirely upon the basis of experimentation upon animals. Finally the dark clouds of uncertainty cleared away and the clear, bright sunshine of established truth burst forth. The aseptic animal ligature was evolved as a part of Lister's wonderful achievement. The object of the search of the best minds in surgery for centuries was at last found. A ligature had developed which will fulfil all the purposes of hemostasis with certainty and safety, inflict the minimum amount of traumatism, produce the least amount of irritation—serving its purpose pending the completion of the healing process, yet finally disappearing by absorption and substitution when its office has ceased.

Another striking instance of the value to surgery of definite results, derived from experimentation upon animals, is shown in the advances made in our knowledge of processes of repair in osseous structures. The developments in this field alone have been of incalculable benefit to mankind. Duhamel's theory that the growth of bones takes place by an extension of their parts was far from satisfactory to Hunter. He therefore (1772) carried out his classical experiments upon the growth of bone by feeding pigs upon *Rubia tinctorum*, or madder, which has the property of coloring that portion of the bone which develops during the time the animal is fed upon the plant. By means of these and the additional experiments of embedding foreign bodies (shot) in the long bones of animals, at fixed distances from each other, he proved that Duhamel was in error, and that the growth of bones was accomplished by the addition of nutritious material and the simultaneous removal of old bone, the osseous structure in this way maintaining its form and the proper relation of its parts. Howship (1817) followed up this work, and by a series of experiments upon rabbits, made a most valuable contribution to the then existing knowledge of the processes of repair in fractures. He observed the effusion of blood in the neighborhood of the injury, the changes which this undergoes, the fact that it is the medium in which the ossific reparative processes are carried on, the imperative necessity for firm fixation in order that these be not interfered with, and the circumstances governing the quantity and seat of the ossific deposit. In 1836 the work was taken up by Syme, and in 1837 by Heine; in 1844 by Flourens, and later (1858–1863) by Ollier's classical observations and contributions to the physiology and surgery of the osseous system, particularly the osteogenetic properties of the periosteum.

In fact, commencing with Hunter's classical experiments in 1772, almost the entire knowledge of bone surgery at our disposal to-day has been worked out upon the lines first laid down by that great surgeon and those who came after them, including Hofmokl's studies upon the histology of bone during fetal life, and the observation that during the development of bone cartilage-cells are transformed into bone-cells (1874); Kassowitz's observations upon the deposit of early matter in the fibrillary reticulum (1879); Regal and Vignal's experimental researches, which showed that irritation of the periosteum resulted in the production of new bone from the medullary tissue beneath, without passing through the stage of cartilage, and the additional fact, that if the periosteum is destroyed its place is supplied by a connective-tissue cicatrix which resembles the periosteum and supplies its place in case fracture, is subsequently produced at the site of the former periosteal defect (1883); Kosmowski's observations upon the methods of repair in fractures of the skull, in which it is shown that to the osteogenetic properties of the medullary tissue are due the reparative processes in general, and the union of loose splinters of bone in particular; and P. Bruns' experiments upon autotransplantation of marrow which showed that formation of bone takes place from preëxisting osteoblasts in the marrow, a result which constitutes, according to Senn, a potent argument in favor of renewed efforts to obtain bony union in intracapsular fractures of the neck of the femur. Time will not permit me even to mention the names, much less dwell upon the labors of all those who have materially contributed to our store of information, by experiments upon animals in this most important branch of surgical science and art.

Nor will time permit more than a passing reference to these researches commencing with Galen's experiments upon the alimentary canal, and continuing through the intervening centuries until their fullest fructification was reached by the labors of that grand exponent of surgical truth, Nicholas Senn. Who does not know of the wonderful achievements of this man in intestinal surgery alone? Achievements that were made possible by that same development of moral and intellectual force which circles around and has evolved from that which has existed since the very beginning of man's need of aid from man. This precept has possessed the same cogency through all time and remains the golden rule of to-day! Nor can I more than allude to those truths that have been snatched from depths which have been deemed as unfathomable as the mystery of life itself, and that bid fair to rob tetanus of its terrors, hydrophobia of its horrors, and septicemia, in its various forms, of its thousands of victims yearly. Even that God-given boon, anesthesia, as I shall show further on, was evolved, in its final and consummate triumph, upon the basis of animal experimentation. With truth and love of fellow man as the aim and object, the imponderable forces of moral and intellectual development the motive power, and animal experimentation the means, the march of

progress has gone steadily on, and will go on in spite of those who would block the wheels of science by prohibitory laws, the result of a mistaken philanthropy and a misguided enthusiasm.

ANESTHESIA.

The thought-nucleus of anesthesia is found in the gradual evolution of the nervous system of man to its present high development. Around this cluster efforts at self-preservation and the instinct of protection against, and relief from, pain. Through countless ages the struggle went on, and with increased sensitiveness to external impressions came increased demand for means to assuage the pangs of injuries inflicted during combats with those natural foes encountered in the struggle for existence. With the evolution of powers of reasoning this instinct became fully developed, and it is possible for us to believe that methods of accomplishing the relief of pain, more or less completely, were known to the wandering tribes centuries before Abraham came down into Egypt, and are now among the lost arts.

* * * * * *

In Morton's discovery of anesthesia can be discerned the effects of that intellectual evolution which made possible the development of this aid to the surgeon's art. In the world of science there had already dawned a realization of the importance of untrammeled inquiry and the necessity for sound methods of investigation by experimentation, which should admit of verification at every stage of the process.

Of secondary interest is the story of the discovery of the anesthetic properties of chloroform. Flourens, the French physiologist, in 1847 related before the Academy of Sciences, how, after employing hydrochloric ether for purposes of anesthesia, he was led to experiment with chloroform, a substance closely allied to chloric ether. He was completely successful in anesthetizing animals during the otherwise most painful physiological experiments. About this time a student of Dr. John Bell, Furnell by name, who, subsequent to the announcement of the anesthetic effects of this agent, had been in the habit of inhaling ether, and from whom Bell, for fear that the young man would do himself some harm, had hidden the ether bottle, suggested to Mr. Holmes Coote the use of chloroform, a bottle of which he had found and experimented with upon himself while searching his master's medicine-chest for the missing ether-bottle. Dr. Bell seems to have learned of this accidental discovery of the properties of chloroform by his student, and to have imparted the knowledge to Waldie, the Liverpool druggist. It was upon a suggestion from the latter that Simpson made trial of this agent and soon satisfied himself of its valuable properties.

ANTISEPSIS AND ASEPSIS.

The discovery of anesthesia, marking, as it does, one era of the century now drawing rapidly to a close, stood out like a beacon-light and shone alone, albeit with a glorious effulgence, for a score of years, until the modest Scotch surgeon, Lister, wrenched another great secret from the rock of hiding of great truths, which awaited but the rod of such a Moses to bring it forth. The little spark first kindled in the wards of the Royal Infirmary at Glasgow, although at first almost quenched in the pitiless rainfall of ridicule, has survived and furnished the stimulus for other workers, and now stands glowing forth, casting its brightness upon a heretofore dark and unexplored ocean's waste, and lighting the way for other explorers.[1] Doubted and otherwise contemptuously treated by his own countrymen at first, with the exception of Jenner, no discoverer of modern times has had more to contend with in the attempt to place truth upon a certain foundation than Lister. The struggle, however, was a short one. Ere long the processes of evolution of the human mind, which had been at work slowly, but surely, since the days of such giant minds as Galileo and Newton, came to his aid. Without regard to the special details of Lister's method, the underlying principle was soon recognized with that unerring instinct which places first in importance any suggestion which broadens our thought as to the possibilities, however remote, of a new grasp upon the processes of Nature, and the application of knowledge thus gained to the needs of the human race.

Without detracting in the slightest from the glory of Lister's achievement, it is but fair to say that his was but the application of a principle, that of germ-growth, which was then in the process of development, to the solution of a problem that was uppermost in the minds of other workers. The peculiar conditions under which microorganisms proliferate being known, it was but a step further to the suggestion that these possessed irritating properties when brought in contact with tissues whose vital resistance had been lowered by the infliction of an injury. That the relation of germ-infection to wound-diseases did not first occur to Pasteur, is only to be explained upon the assumption that the evolutionary changes in the mind of the latter stopped short at the stage of the application of the germ-theory of disease to locally favorable conditions in the human body. His mental vision had grasped in succession the catalysis of Berzelius, the relation of fermentative processes to the growth of mold-fungi, the dependence of certain epidemic diseases in lower animals upon microörganisms of similar origin, and the possibilities of the laws of susceptibility and immunity. Here, however, his work, so far as it relates to surgical diseases, ceases, and at this point it is taken up by Lister. It is but the repetition of "the spectacle so often witnessed in the history of science of a brilliant discoverer traveling in triumph along some new path, but stopping just short of the goal which subsequent exploration has revealed. A great fact stands looming up before his face, but, through the excess of light which he has already taken in, he is blind to its presence. The intellectual effort already put forth has left no surplus for a more extensive sweep of comprehension, and further progress requires a new start and forces generated from a fresher

[1] "On a New Method of Treating Compound Fracture, Abscess, Etc., with Observations on the Conditions of Suppuration," by Joseph Lister, Esq., F.R.S., Professor of Surgery in the University of Glasgow, *The Lancet*, March 16, 23, and 30, 1867, pp. 326, 357, 387.

mind."[1] With faculties unjaded and unwarped, Lister appeared upon the scene. The long lines of thought devoted to studies of the growth and life-history of microscopically minute vegetable organisms led up logically to the inception of his task and its final consummation.

As a further stage of the evolution of moral forces based upon the element of safety, came an inquiry as to the effects of the antiseptic agents themselves upon the individual, and the behavior of the tissues, when contact with possible sources of infection were eliminated. Two facts were thus developed: (1) It was ascertained that the use of germicidal agents was a not unmixed good; (2) that the prevalence of pathogenic bacteria was not nearly as great as had been formerly supposed; and (3) that the tissues themselves, when uninjured, possessed a certain amount of resistance to the invasion and effects of these latter, the lessening of this resistance being in direct proportion to the extent of the injury inflicted upon the parts by the operation itself, or by whatever was brought into contact with them. With the study of the natural processes of repair, of tissue-resistance, and evolvement of the *locus minoris resistentiæ*, came the demand for the protection of living cells, and the evolution of asepsis. Slowly, but surely, this portion of the chain was forged and fashioned, until it stands as the connecting-link between the pound of cure of the past and the ounce of prevention of the future.

The last link of this chain to be worked out was the evolution of the aseptic conscience. The entire circle of protection thrown about the operating-field could be broken and every precaution set at naught by a lapse of watchfulness, or want of care on the part of any one of the participants in the operation. It was early recognized that constant vigilance was the price of safety, and hence arose the necessity of inculcation in the assistants by the operating surgeon of precept upon precept and line upon line. The knowledge derived from Cheyne's labors, that even the air of hospital-wards was comparatively free from noxious germ-life, led to the inquiry as to the sources of the infecting agents; and when it was realized that these were to be found in the skin of the patient, his clothing and hair, the hands, and particularly the finger-nails of the operator, the persons of nurses, and, in fact, everything with which the patient might come in contact, which had not been previously disinfected, the necessity for the most rigorously protective environment was declared and emphasized, and the responsibility of the operator increased. This extreme degree of surveillance was soon followed by a highly developed mental sensitiveness in those engaged in the work, which rendered them susceptible to and conscious of the slightest act calculated to impair the purity of the aseptic technique, either on their own part or that of others.

THE RÖNTGEN RAYS IN SURGERY.

Sound knowledge of pathology and correct diagnosis must always remain the groundwork for successful treatment, and no surgeon, however skilful as an operator, can hope to attain the acme of usefulness in his work without these. The substitution of accuracy for guesswork, of certainty for uncertainty, of positive knowledge for abstract theorizing, must ever be attractive to the scientific mind. The discovery of Professor Röntgen of Würzburg, within the past year, of the peculiar power of certain rays to pass through substances that are opaque to what we know as light, bids fair to be to surgical diagnosis what animal experimentation, anesthesia, and asepsis are to operative surgery.

The story of the discovery of the Röntgen rays reads almost like a chapter from one of Bulwer's tales. One night, while working in his laboratory with a Crookes' tube trying to fathom the mystery of the cathode rays, his attention was attracted by a piece of paper lying upon the work-table, upon which appeared a luminous, sparkling spot, as if a single ray of bright sunshine, coming through an opening in a dark shutter, had fallen upon it. This explanation of the phenomenon was manifestly impossible, since it was night. The reflection was too bright to proceed from his induction machine. Upon examining the piece of paper closely, he found that the reflected light had been given off from a portion of the sheet where some idle student in the laboratory had carelessly traced the letter "A" with a platinum-cyanid solution. He at once came to the conclusion that the illumination of the paper must have been caused by the rays from the cathode of the Crookes' tube, although these were invisible to the eye. The mind of the practical surgeon grasps at once the possibilities of not only detecting the presence of foreign bodies, but the relative positions of the fragments in fractures, and of articular surfaces in dislocations. Both the methods of immediate inspection by means of the fluoroscopic tube and screen, as well as permanent record through the medium of the skiagraphic plate, are already in use, and yet not a twelvemonth has elapsed since Professor Röntgen announced his discovery. One year ago to-night the possibilities of the application of this one of the results that have been evolved from the labors of Faraday, Maxwell, Hertz, Lenard, and Röntgen were scarcely dreamed of; and yet such has been the contention for the privileges of priority that practical methods have been rapidly brought forward, through the labors of Edison, Pupin, and others, for the utilization of this vast work for the purposes of practical surgery.

When we pause and gaze upon the magnificent structure that has risen during the present century, every stone of which represents the strength of a patient, earnest, and conscientious worker, cemented together only too often by the life-blood of the martyr, it is scarcely possible for the human mind to realize that so much could be accomplished in so short a time, much less grasp the possibilities of the future.

The lessons of the past gather about us like the falling leaves of a summer's departing glory, but they are not lost nor wasted. Properly interpreted, they serve to emphasize man's opportunity in the present and his hope for the future. Not the least among these lessons is that which teaches us that the unfolding of Nature's secrets is but a part of the plan of the creation; that irresistible

[1] Professor Fisk, "A Century's Progress in Science," *The Atlantic Monthly*, July, 1896.

forces are at work evolving truth and casting aside error; and, finally, that man's present position in this great work removes him from the place of a creation of the hour, and stamps him as the product of all time and the heir of all eternity.

The century upon the threshold of which we stand is lighted with jewels of hope in golden settings, and its atmosphere is filled with the sweet music of promise. The brightness of the one and the melody of the other is enhanced by the thought that no Macaulay-like prophet has conjured up the vision of a horde of wolf-like charlatans running riot among the fallen columns and dismantled arches of the Temple of Science, that mighty citadel so graphically described by our own Holmes as

The towering pride of twice a thousand years.

CLINICAL MEMORANDUM.

EXTERNAL URETHROTOMY IN A CHILD, AND OTHER CASES.[1]

BY FRANK C. HAMMOND, M.D.,
OF PHILADELPHIA, PA.;
SENIOR AND SURGICAL RESIDENT ST. JOSEPH'S HOSPITAL.

CASE I.—G. D., female, six years of age, was admitted to the ward, April 6, 1896. About four months prior while at play she fell and struck her left knee a violent blow. A week or two following the injury, slight swelling was noticed by the mother, in the neighborhood of the joint. On examination the knee of the affected side was found greatly swollen, almost three times the size of the sound side. The color of the skin surrounding the joint was the same as that of the remaining portion of the leg. On palpation it felt several degrees warmer than the sound joint. In comparison with the other leg, no atrophy was present either above or below the articulation. The child was able to stand on the leg, but unable to bend it at the knee. The patella was adherent, and the tissues surrounding the joint markedly resistant. Although no tubercular history could be obtained, there was some doubt in regard to the mother's physical condition, as there was an impairment of resonance over the apices of the lungs. The mother refused to bring a specimen of her sputum for bacteriological investigation, hence the presence or absence of tubercle bacilli could not be ascertained. However, everything pointed to a tubercular arthritis. The little sufferer was placed in bed, and extension applied by means of weights over the foot of the bed. Sand-bags were also applied, and the child was placed on a full diet of the hospital-diet list. On June 22d the mother was very anxious to take the little one home, and she was allowed to go. On that date the swelling had subsided to such a degree that the affected knee was very slightly larger than the sound one, the patella was freely movable, and she was able to bend the knee and walk with little difficulty. After the first two weeks in bed no pain was experienced on examining the joint.

CASE II.—April 8th, about eight A.M., J. C., six years of age, was brought to the hospital by his mother, who gave the following history: About one year ago the boy suffered from a severe attack of acute gastritis, and after this from an entero-colitis. Prior to and since this attack he has enjoyed very good health. The evening of the 6th he complained of sharp pains in the hypogastrium, which later on in the night became quite severe. The mother, thinking it was a similar attack to the one twelve months previous, administered Hoffmann's anodyne. This apparently relieved the child, for he complained of no pain till the following morning. During the night no urine was passed. The morning of the 7th the severe, sharp, stabbing pains returned, and occurred off and on during the day. The child was permitted to attend school, and on his return home in the afternoon he informed his parents that he had not urinated since early the evening previous. During the evening of the 7th, the pain increased, and the constant desire to pass urine manifested itself. The next morning, thirty-six hours after the attack began (and during this time no urine had been passed), he was taken to the family physician, who referred him to this hospital for operation. On examination I found the bladder greatly distended, pyriform, and with its fundus reaching as high as the umbilicus. The bladder seemed on the verge of rupturing. The slightest touch of the abdomen in this region was resented by the child, owing to the existing tenderness. The tongue and mouth were markedly dry, the skin was warm, relaxed, and covered with perspiration; pulse and respiration slightly accelerated. Temperature, taken sublingually, 100° F. A filiform catheter was introduced into the urethra, which met with an obstruction at its membranous position. Tapping on the obstruction with the catheter, a noise was produced, distinctly heard by those around, and a diagnosis of impacted stone was made. Following along the track of the urethra externally, the stone could be easily felt, and readily seized between the fingers. As is the custom, I intended sending for my chief, but fearing the bladder might rupture prior to his arrival, I decided to do an external urethrotomy at once. The child was chloroformed and placed in the lithotomy-position. The parts were scrubbed and everything prepared to do an antiseptic operation, as antisepsis, during and after the operation, has minimized the danger of laceration of the mucous membrane.

The stone was seized between the thumb and index-finger, and was cut down upon. The incision was made over the urethra, at the junction between the penis and the scrotum. The skin was incised, and the underlying cellular tissue separated with the handle of the knife. The urethra was opened directly over the stone, and owing to the edematous condition present, some little difficulty was experienced in removing the stone from its boggy bed. Upon its removal the urine failed to flow away. A metal catheter was then introduced through the meatus and penile urethra, but I was unable to pass it beyond the incised portion of the membranous urethra. This being unsuccessful, catheterization was then tried through the incision, endeavoring this way to enter the membranous urethra, and then enter the bladder.

[1] These cases occurred in the service of Robert B. Cruice, M.D.

This procedure, however, proved a failure. Then the first method was repeated; this proved successful. The major portion of the urine was allowed to escape, the catheter was permitted to remain, and the external end cut off about an inch from the meatus, and retained in position by means of silk and adhesive strips. The incision was closed by three silk sutures, which were removed on the sixth day with primum intestionem. About an hour after the operation the remaining urine was allowed to escape, and the bladder was washed out with a boric-acid solution. The catheter was removed at the end of ten days, and since then not the slightest inconvenience has been experienced on urination.

Since the operation bougies have been introduced from time to time, but no contraction of the urethra has been found. On the second day the temperature returned to normal, and remained so until the boy's discharge, April 24th. The stone was brittle, and a small piece chipped off during its removal. It was roughened, measured three-eighths of an inch in diameter, and was a uric-acid calculus.

CASE III.—J. H., male, aged twenty-five, electrician, was admitted to the house shortly after midnight. This man works in one of the power-houses near by, and while passing in front of the switch-board, through an imperfection, a flash occurred. As a result the face, neck, both arms and hands, and front part of chest were burned, the hair being singed off the head, eyebrows, and eyelids. There was no involvement of the cornea or conjunctiva. He was suffering a great deal of pain, though very little shock. He was completely enveloped in gauze, saturated with carron-oil, which had been applied by his fellow workmen. After being removed from the receiving-ward to the surgical ward, the above dressing was removed, and one of saturated solution of sodii bicarbonas instituted. After the expiration of thirty-six hours all sensation of heat had disappeared, and an antiseptic dressing consisting of a carbolic-acid solution was substituted. In the dispensary- and ward-work we have found carbolic acid to be the preferable dressing for burns and scalds. It not only acts as an antiseptic, but also relieves the burning sensation and pain. The temperature during the night and next day ranged along 102° F. Second day it fell to 99⅘° F., then gradually ascended, till on the fourth day it reached 102⅘° F., and remained so until the evening of the fifth day, when it gradually began to descend, and on the ninth day it had reached normal. Some superficial sloughing occurred on the neck, arms, and chest; none on the face. None of the complications such as duodenal ulcers and nephritic lesions, so common with such extensive burns of the body, were present. On the day of discharge, July 13th, the various surfaces had all healed, and the only contraction present was on the right half of the neck, the chin being drawn downward and to the right of the median line. The patient expects to return to the hospital sometime this fall for an operation to relieve this contraction. According to the statement of members of the staff, this was one of the worst cases of the kind ever admitted to this hospital.

MEDICAL PROGRESS.

Auto-intoxication from Chronic Constipation.—As the result of a careful study FERMI and CASCIANI (*Centralblatt für Bakteriologie, Parasitenkunde und Infektionskrankheiten*, 1896, Nos. 22, 23, p. 869) have arrived at the conclusion that the symptoms associated with chronic constipation are attributable to a multiplicity of causes. Neither the mechanical theory, nor the nervous theory, nor the theory of auto-intoxication affords alone a sufficient explanation. The symptom-complex may result from auto-intoxication in consequence of the absorption of toxic substances generated in the gastro-intestinal tract; from auto-intoxication resulting from diminished or abolished excretion through the bowel of normal or pathologic substances, and especially through the reflex influence resulting from the mechanical or chemic irritation due to retarded intestinal activity.

THERAPEUTIC NOTES.

For Malarial Fever in Children.—

℞ Tinct. of *Eucalyptus globulus* } aa 2 fluidrams
Alcohol }
Quinin hydrochlorate . . ½ dram
Quinoidin . . . . . 1 scruple
Hydrochloric acid, sufficient to make a solution.

Dose: From 20 to 40 drops five times a day.
—ZUCKERMANN, *Semaine Médicale*, 1896, No. 35.

Palliative Treatment of Carcinoma of the Uterus With Sodium Chlorate.—In the treatment of malignant disease of the uterus the employment of sodium chlorate is recommended both by internal administration and applied topically. For internal use the following formula may be employed:

℞ Sodium chlorate . . . 4 fluidrams
Syrup of orange-flower . . 6 fluidrams
Distilled water . . . 5 fluid ounces
Mix.

Dose: A tablespoonful or two from twice to four times a day.

As a local application a small amount of the following powder may be dusted upon the diseased surface:

℞ Sodium chlorate } aa . . 4 drams
Bismuth subnitrate }
Iodoform . . . . . 2 drams
Mix.

One may also employ tampons of sterilized gauze saturated with a mixture of

℞ Iodoform . . . . . 1 part
Sodium chlorate } aa . . . 20 parts
Glycerin }

If iodoform be badly borne and give rise to toxic symptoms, cotton impregnated with salol may be used, being first immersed in a twenty-per-cent. aqueous solution of sodium chlorate.

Under the influence of the foregoing treatment metrorrhagia and fetid discharge diminish, the pain lessens, the turgescence of the cervix subsides, ulceration disappears, appetite and digestion are restored, and the general state is improved.—*Semaine Médicale*, 1896, No. 35, p. 278.

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SATURDAY, NOVEMBER 28, 1896.

INFANTILE TUBERCULOSIS BY INGESTION.

TUBERCULOSIS of the intestine is exceptional in the first two years of life, as shown by the statistics of Weiderhofer, who, in 101 cases of intestinal tuberculosis in childhood, found only six under two years of age, and a percentage of eight for all cases of tuberculosis under two years, as opposed to twenty-eight per cent. for cases in children from two to fifteen years of age. Three sources of origin for intestinal tuberculosis are possible: (1) In acute miliary tuberculosis small, gray, semi-transparent granulations may be found upon the intestinal mucous membrane. These are hematogenous in origin. (2) In young children having chronic pulmonary tuberculosis with cavities the intestine may be infected from the swallowed expectoration. The lesion then assumes the common ulcerous form seen in adult consumptives. It is extremely rare under two years. (3) After the ingestion of tuberculous food, especially the milk of a tuberculous cow. In these cases there may be no lesion of the intestinal mucous membrane, the bacillus having traversed it to find a suitable soil for growth in the mesenteric glands. When lesion of the mucous membrane occurs it ordinarily assumes a special form—discrete without ulceration. This is characterized by submucous nodules the size of a pea, filled with gray, or cheesy, more or less softened material, and united by a delicate, fibrous covering, these nodules corresponding in position with the affected mesenteric glands.

Drs. Marfan and Apert in the *Revue Mensuelle des Maladies de l'Enfance*, June, 1896, consider the above subject, basing their remarks on a somewhat unusual example of tuberculous disease in a child, aged sixteen months. This child had been nourished only at the breast, with the exception of certain days, when, the mother being at work, cow's milk had been given. The family history showed healed tuberculous cervical adenitis in the mother. One of her nine children had died of tuberculous peritonitis, and another had coxalgia. At the age of nine months the patient had come under treatment for a suppurative adenitis of the neck, and at this time it was noticed that there were ulcerations upon the gums, covered by pultaceous and fetid exudate, which persisted despite treatment instituted at the time. At the age of thirteen months a diarrhea began, and persisted without amelioration till death, a few days after admission to the hospital. The autopsy revealed an enormous mass of tuberculous mesenteric glands, with tuberculous ulcerations of the colon, ileum, jejunum, and duodenum; the liver, spleen, heart, and kidneys were normal; a few small, recent, grayish granulations, with two small foci of broncho-pneumonia in the right base, indicated the degree to which the lungs were involved.

According to the authors the first focus of disease was the mouth and the ganglia of the neck; next the intestine. The slight pulmonary lesions were of recent origin. The source of the infection must be assigned to the milk of the mother or of the cow.

The importance of the subject in the early feeding of babies cannot be too urgently insisted upon. If the mother of the child is tuberculous, the first duty of the physician is to remove the child immediately from its mother's milk, and rear it preferably on the breast of a healthy wet-nurse, or if this is impracticable, upon sterilized milk of the cow. As pointed out in a recent editorial the principle of "ingestion tuberculosis" is practically recognized in Denmark in the rearing of cows, horses, and swine.

THE TREATMENT OF DIPHTHERIA WITH THE ANTITOXIN.

ADDITIONAL testimony is constantly accumulating to establish beyond doubt the utility of the

antitoxin in the treatment of diphtheria. A recent contribution can be found in the report made by FURTH (*Münchener medicinische Wochenschrift*, 1896, No. 29, p. 669) of 150 cases thus treated at the medical and surgical clinics of the University of Freiburg. This report is supplementary to a previous report of 100 cases treated in the same way. Of the 150 cases diphtheria-bacilli were found in 123. In the remaining 27 the diagnosis was confirmed by subsequent tracheotomy; of these, besides, 13 terminated fatally, and were examined *post mortem*. Twelve cases in which diphtheria-bacilli were not found, were treated with the antitoxin, but they are not included in these statistics. In 34 of the 123 cases streptococci also were found, but the examinations were made twenty hours after inoculation—at a time thus unfavorable to the development of streptococci. In 5 children with laryngeal diphtheria, of whom 3 required tracheotomy and 2 died, diphtheria-bacilli were cultivated from the pharynx, although this was free from membrane, swelling, or redness. One of these children had also measles, so that the diagnosis was a matter of considerable significance. Of the 150 cases 122 were uncomplicated and 28 complicated. The complications included measles (16), scarlatina (5), measles and scarlatina (2), measles and typhoid fever (1), and tuberculosis (4). Among the 122 uncomplicated cases there were 12 deaths (9.8 per cent.); tracheotomy was required in 26 cases (21.3 per cent.), with 9 deaths (34.6 per cent.). Among the complicated cases there were 11 deaths (39 per cent.); tracheotomy was required in 9 cases (32 per cent.), with 6 deaths (66.6 per cent.). Of the whole number of 150 cases death occurred in 23 (15.3 per cent.).

Notwithstanding the coincidence of epidemics of measles and scarlet fever the mortality was lower than in any previous year. The proportion of cases requiring tracheotomy was also smaller, and the mortality among these also lower. Over and above the complications the disease itself was in many instances of unusual severity. While in former periods the mortality in early life had varied from 60 to 100 per cent., in the present collection of cases there were only 3 deaths among 19 children under two years of age, although 8 of these cases required tracheotomy. The dose of the antitoxin employed was larger than previously. Of the fatal cases 2 were septic, without involvement of the larynx. Both of these came under observation on the fourth day of the disease, and death took place in sixteen and sixty-eight hours, respectively. In 6 cases death resulted from descending croup; all required tracheotomy. In 2 cases death was due to diffuse bronchopneumonia, after the local process had terminated. Finally, in 2 of the cases, death resulted from paralysis of the heart on the sixth and forty-first days of observation, respectively.

BROOKLYN'S CHARITY HOSPITAL.

COMMISSIONER BERGEN of the New York State Board of Charities has recently filed in Albany a report on the Kings County Hospital. He presents in greater detail the disgraceful conditions existing in that institution, but otherwise only repeats facts which have already been pointed out in our editorial columns, October 3, 1896. The observations cited by Mr. Bergen were made more than six months ago, but from personal inspection we know that the conditions have not improved, and if possible are now even worse than he depicts them. This hospital is the largest in Kings county, and in number of inmates the third largest in the State. Within its doors are found all sorts and conditions of the afflicted poor, a large portion of whom would find more appropriate accommodations in almshouses, workhouses, homes for incurables, or inebriate asylums.

The immediate management is absolved from responsibility for the existing conditions because of the inexorable requirements of the law, which compel it to receive every applicant residing within the county, as well as State paupers, upon contract, and those suspected of insanity until examined by the physicians. It matters not what demands are made, no one of these can be rejected upon the excuse of a lack of room.

There results from this the fact that there is an average of more than twenty persons in each ward, originally designed to accommodate ten. A surgical ward provided with ten beds was made per force to accommodate twenty-four patients. Another had ten beds and thirty-three inmates. Nurses sleep in the wards with the patients, and in the entire hospital considerably over two hundred of the inmates sleep on mattresses thrown upon the floor.

During the past year relief was sought by diverting to building purposes $40,000 which had

been saved from the appropriation for current expenses, but through official indirection this sum remains unavailable. And thus suffering, filth, and criminal neglect make the daily record of Brooklyn's care of her helpless poor, while officials squabble over technicalities.

This incongruous horde of broken humanity, with afflictions differing less in distressing form and fatality than in pathological variety, herded like cattle beneath this single roof, presents a scene too repulsive for the eyes of this enlightened age. To the eternal shame of Brooklyn be it known that she is silently fostering this abuse. Why criticise the cruel Spaniard or fly in the face of the unfeeling Turk, while at our very doors such crimes are committed in the name of charity?

ECHOES AND NEWS.

The New York Hospital.—It is reported that Dr. William H. Draper has resigned his position as visiting physician to this hospital.

Dr. Moore Madden Honored.—The Royal University of Ireland has conferred the degree of Master of Obstetrics (M.A.O.) on Dr. Moore Madden, well known as the author of "Clinical Gynecology."

The Deborah Nursery.—The New York Board of Health has ordered the vacation of the Ladies' Deborah Nursery and Child's Protectory, unless proper medical attendance for the ophthalmic children there is provided.

Preliminary Examinations in Missouri.—How urgent has been the need of an entrance-examination in the Western medical schools is indicated by the results of a recent test. Of seventy-two candidates thirty failed.

Honor Conferred.—The Asiatic Society of Bengal at its last annual meeting elected Sir Joseph Lister and Professor Michael Foster honorary members to fill vacancies made by the deaths of Professor Huxley and M. Pasteur.

A New Turkish Bath.—The hot-sand bath in vogue among Mohammedans has been tried by Swiss physicians with good results in rheumatism, gout, and neuralgia. It is regarded as a potent sudorific which does not affect the heart.

The Epidemic of Beri-beri in Dublin.—There have been ninety-eight cases of beri-beri, with six deaths, to date, in the recent epidemic at the Richmond Asylum, Dublin. The epidemic is characterized by a tendency to frequent and sudden relapses.

The Harlem Dispensary.—The great increase in the number of poor patients applying to the Harlem Dispensary for treatment has necessitated its removal to larger premises at 108 East 128th street, which were formally opened November 23d.

A Meeting of Assistant Physicians of Hospitals for the Insane.—The fourth meeting of the Association of Assistant Physicians of Hospitals for the Insane will be held at the Eastern Michigan Asylum, Pontiac, Mich., on December 3 and 4, 1896.

Medical Electricians.—Drs. Milne Murray and Dawson Turner have been appointed, by the Medical Managers' Committee, medical electricians to the Edinburgh (Scotland) Royal Infirmary, where a very complete electrical plant has been established.

Formalin and Museum-specimens.—Several pathological specimens which had been preserved by formalin were exhibited at a recent meeting of the London Pathological Society. Though they had been preserved for several months, no change in their original color was observable.

Cancer Treated by the X-ray.—The *Lyon Médical* tells of the treatment of cancer of the stomach by the X-ray, and claims that it ameliorated the general condition and prolonged the patient's life for two weeks, absolutely suppressing the pain over the tumor and notably diminishing the volume.

The Journal of Nervous and Mental Disease.—The following are announced as editors of this journal for the coming year: Drs. Chas. L. Dana, F. X. Dercum, Philip Coombes Knapp, Chas. K. Mills, Jas. J. Putnam, B. Sachs, M. Allen Starr. Dr. Chas. Henry Brown will be managing editor.

Hughlings Jackson Lectureship.—The Neurological Society of London has announced its decision to establish a lectureship to be named in honor of Dr. Jackson, one of the founders and the first president of that body. At the earnest request of the Society, Dr. Jackson has consented to deliver the first lecture.

Brooklyn's Water-supply.—Mayor Wurster of Brooklyn urges that the question of the future water-supply for the city be settled before he retires from office and before the city becomes a part of the Greater New York. He has decided to hold public hearings on the subject, at which the matter can be freely discussed.

Life-insurance of Women.—Only eight or nine of the life-insurance companies insure women at the same rate as men. Further experience is now convincing these companies of the injustice of this discrimination. The mortality-rate among the female risks in one company did not rise above eighty per cent. of its anticipation.

The German Poliklinik.—On the 17th of December, an entertainment will be given at the Metropolitan Opera House under the management of Messrs. Daly, Frohman, Seidl, and others for the benefit of the New York German Poliklinik. This institution has quite outgrown its present quarters, and increased funds are needed.

The Uniform of Bellevue Hospital.—One hundred and twenty-five attachés of Bellevue Hospital appeared in uniform this week. The men are divided into five grades, each grade having a distinctive style of uniform. The

uniforms of four grades are of blue cloth, trimmed with red braid, while those of the fifth grade are of gray cloth.

An Elevator Accident.—One day last week an elevator-car in the American Tract Society Building, New York, became unmanageable and fell several stories. The man in charge, with commendable presence of mind, called upon the passengers to stand upon their toes, thus breaking the force of the concussion. One man fractured his patellæ. But the advice saved all the others from serious injury.

The Climate of England.—At the recent sanitary congress in London Mr. Dines said that it was satisfactory to find that the much-abused climate of England was superior to that of any of the colonies in which troops were kept, excepting Canada. Dealing with the Registrar-General's returns, the President came to the conclusion that a temperature below 60° F. was the most suitable for human life.

New York's Low Death-rate.—The number of deaths from all causes—566—for the week ending Saturday, December 21st, was remarkably low. It is the lowest death-rate that has been reported for any single week since the first week in December, 1889, when the deaths were also 566. No lower number of deaths has been reported since the first week in November, 1887, when there were 565 deaths.

Female Members of the Royal College of Surgeons.—The question of granting diplomas of the Royal College of Surgeons to women is exciting much interest in medical circles of England. The meeting of Fellows favored, but the Council vetoed the proposal, because the allied College of Physicians declined to concur, and because they believed that women are not physically fitted to undertake the major surgical operations.

A Directory of Nurses.—The first edition of a Trained Nurses' Directory by Miss Louise Longeway of New York has just made its appearance. It contains only the names of nurses who have graduated from schools giving a minimum course of two years in a hospital of over one hundred beds. In addition to this, a years' experience in private nursing, and the certificates of prominent physicians and surgeons are required.

The Blind and the X-ray.—From certain experiences in a dark room, Edison determined to try the effect of the ray on two blind men. Experiments were tried with different tubes, and the men said they could distinguish little points of light. The opportunity for embellishment which this afforded was not to be lost, and Mr. Edison was even reported as having said with the X-ray he could make the blind see. The *Sun* quotes him as much annoyed by the absurd statements that had been made.

The Paris Water-supply.—The French capital has already exhausted all the available water in its vicinity, and still the supply is very inadequate. Excluding a certain percentage of very questionable water taken from the Seine and the Ourcq Canal, the amount furnished each inhabitant *per diem* is only a little more than half what is provided in New York City. In order to meet the imperious demands of hygiene for a more liberal supply, Paris is now seriously considering a project of bringing water from Lake Geneva, at a cost of $100,000,000. This source is said to be unexcelled in purity.

The Proposed Infirmary at Harvard University.—For the last two years there has been agitation for the establishment of an infirmary at Harvard. The corporation is now ready to contribute toward buying a suitable site, and a tentative plan has been prepared by an architect. It is hoped that the remainder of the funds required will be raised by subscription. Meanwhile the *Harvard Graduates' Magazine* has proposed a plan by which the running expenses of the infirmary may be met by a fixed charge on the term-bill of each student, and medical attendance for poor students be supplied out of the general sum.

Beer-adulteration.—The New York State Board of Health has been requested to urge the enactment of a law requiring that only hops and malt shall be used in the manufacture of lager beer, and that its chemist shall analyze the different beers manufactured in the State and ascertain whether substitutes for hops are being used, particularly glucose, corn-meal, rice, sirup, and starch. The time during which the beer is stored will also, it is said, be regulated by law, owing to the notoriously injurious properties of beer only a few weeks old. There are 289 breweries in New York, producing annually 10,000,000 barrels of beer.

The New York Academy of Medicine.—At the annual meeting of the Academy, held November 20th, Dr. George R. Fowler of Brooklyn delivered an address entitled "The Evolution of the Surgery of the Twentieth Century" (see p. 602). Dr. Joseph Bryant, the president of the Academy, announced that most encouraging progress had been made in raising the endowment-fund of the library to $100,000. The original fund amounted to $50,000. During the past year $30,000 more has been added to this. In January the Academy will celebrate its semi-centennial anniversary in Carnegie Hall. The chief feature of this celebration will be an address by President Cleveland.

Resolutions on the Death of Dr. Burchard.—The Northwestern Medical and Surgical Society adopted the following resolutions in regard to Dr. Thos. H. Burchard: *Whereas*, It has pleased God to take away Dr. Thos. H. Burchard, distinguished by twenty years of active and faithful membership in the Northwestern Medical and Surgical Society of New York, and *Whereas*, Our hearts are touched with a great sorrow by the suddenness of his decease, therefore *Resolved*, That we desire to place on record an expression of our esteem of our late colleague, who had endeared himself to us by a long line of friendly and generous offices; that we desire to commemorate his devotion to the medical profession, exemplified in so high a degree by his many contributions to this and to other medical bodies, and by his acknowledged skill as a surgeon; and that we realize in the life of our friend the large equipment of mind and body essential to the success of a true physician.

Twelfth International Medical Congress.—The American National Committee of the Twelfth International Congress, which is to meet at Moscow, Russia, from August 19 to 26, 1897, consists, according to the directions of the General Committee at Moscow, of the following gentlemen: J. S. Billings, M.D., New York; Frank P. Foster, M.D., New York; S. Weir Mitchell, M.D., Philadelphia; Charles A. L. Reed, M.D., Cincinnati; George B. Shattuck, M.D., Boston; F. J. Shepherd, M.D., Montreal; George F. Shrady, M.D., New York; W. S. Thayer, M.D., Baltimore, and the chairman, A. Jacobi, M.D., 110 West Thirty-fourth street, New York. The chairman begs to invite the attention of the medical profession of the United States and Canada to the fact that the professional gentlemen in charge of the Congress are anxious to make it a success both from a scientific and a social point of view. Their difficulties are unusually grave, but it is not their fault that the Congress had to wait for governmental permission to meet in their country, or that a special ukase was required for the admission into Russia of Jewish medical men on equal terms with their Greek, Catholic, Protestant, Agnostic, and Mohammedan colleagues; or that the famous and meritorious Secretary-General was—it appears because of his liberalism—ousted both from his place and from his professorship. They should not be held responsible for the political semi-barbarism of the country in which they live. Their position in the world of science and their endeavor to make the Twelfth Congress equal to its most famous predecessors, will prove an incentive to American physicians to sustain, both by their presence and their contributions, the Russian committee.

The Loomis Sanitarium for Consumptives.—On Friday, November 20th, the buildings composing this sanitarium, which have recently been constructed near the town of Liberty, Sullivan county, N. Y., were dedicated. This sanitarium is a country branch, so to speak, of a small hospital in West Thirty-eighth street, New York City, and has been constructed for the purpose of carrying out the well-recognized principle in tuberculosis that if a patient in the early stages of consumption can obtain a few months' residence in a suitable climate under favorable hygienic surroundings, it is possible, in a certain proportion of cases, to arrest the disease. Only those are admitted who are in the early stage of consumption, and to whom a residence for a number of months in the sanitarium promises either a complete cure or such an improved condition that they can return to their homes and be able to carry on their work. It is a charity, pure and simple, intended for clerks, bookkeepers, self-supporting women, etc. There are no free beds, but the expense is only nominal, ranging from $5 to $7 per week. The atmosphere and climate in the high altitudes of Sullivan county resemble very closely those of the Adirondacks, and this sanitarium is run on exactly the same basis as the sanitarium at Saranac Lake. The ground contains 150 acres among the mountains, three miles from Liberty, and 2200 feet above the sea. The sanitarium has been open since June last, and the demand for accommodation has been so great as to necessitate the use of wards originally intended for emergency cases. The present capacity is thirty-one beds. Patients are admitted after examination by either Dr. Loomis or Dr. Quimby of New York City, or by Dr. J. E. Stubbert, at the sanitarium.

Semi-centennial of the American Medical Association.—In view of the fact that the next meeting, which is to be held in Philadelphia, June 1–4, 1897, will be the semi-centennial gathering, and that it will occur in a great medical center, and near the other great cities of the Eastern coast, the Committee of Arrangements for this meeting have already made provision for the accommodation and entertainment of the delegates by the engagement of the Academy of Music, Horticultural Hall, the South Broad Street Theater, and the large meeting-rooms in the Hotel Walton and Hotel Stenton. As these large buildings are all within a short distance of the great railroad depots in the center of the city, and are all situated within one block on both sides of Broad street, every department of the meeting will be conveniently arranged. At the last meeting of the Association it was voted to devote the first evening of the meeting, Tuesday, June 1st, to dinners of the various sections. The officers of the sections desiring to give such a dinner will please communicate with Dr. G. E. de Schweinitz, Chairman of the Sub-committee on Accommodation, 1401 Locust street, as early as possible in order that dining-rooms may be engaged or other entertainment provided. As it is expected that fully three thousand physicians will be present, the committee suggests that applications for accommodations be made as early as possible. It is hoped that every member of the association will make a special effort to attend. Further circulars of information will be issued by the committee from time to time. Individuals and firms desiring space for exhibition in the Exhibition Hall, which will be in the same block as the various meeting-halls, will please apply promptly to the Chairman of the Sub-committee on Exhibits, Dr. Edward Jackson, 1633 Locust street, Philadelphia.

The Execution of Eight Medical Students.—The Cuban Professional Club of New York commemorated on November 27th the twenty-fifth anniversary of the shooting of eight medical students by the Spanish volunteers in Havana. At 10 A.M. a requiem mass was celebrated at the Church of St. Leo. At eight o'clock in the evening a meeting was held in Chickering Hall. The shooting of the Havana medical students was an atrocious example of Spanish barbarity in Cuba. On November 22, 1871, the class went as usual to the San Dionisio Hospital, and learning that the teacher was absent, decided to spend their unexpected recess in the adjoining cemetery. On the 25th the boys were surprised to see the civil Governor of Havana appear in the class-room. In angry words he said he had come to find out who was the author of the "crime," and added: "One of you has desecrated the tomb of Don Gonzalo Castanon. If you do not say who did it, you will all be held responsible for the crime." All the students were taken to jail, excepting a Spaniard, who, the Governor said, could not have done such an infamy. Don Gonzalo Castanon was a Spanish journalist, who, after having

abused the Cubans in a most indecent way and caused many to be put to death, was killed by a Cuban in a duel at Key West. Without any investigation, the volunteers demanded the lives of the medical students, and, although it would have been easy to go to the cemetery and see that the tomb was untouched, the authorities submitted to the volunteers' demands and the students were "court-martialed." The council sentenced to death eight of the forty-three students. Thirty-two were condemned to hard labor. One of them, Dr. Ricardo Gaston, is now president of the club Oscar Primelles, under whose auspices the anniversary is commemorated. The remaining student, Octavio Smith, was acquitted. He was an American citizen. On November 27th the eight students were shot.

Obituary.—Sir Benjamin Ward Richardson, M.D., F.R.S., died November 21st. He was born in 1828, was made an honorary member of the Philosophical Society of America in 1862, and was a member of a number of other prominent societies. He has been president of the Medical Society of London, and was thirty-two times president of the St. Andrew's Medical Graduates' Association. He succeeded Lord Jervis Woode in 1869 as assessor for the general council in the University Court of St. Andrews, and held that office for nearly sixteen years. At the Social Science Congress at Brighton in October, 1895, Dr. Richardson read a paper in which he gave a sketch of an imaginary "model city of health," to be called Hygeia, which caused much discussion. Dr. Richardson took an active interest in the development of bicycling, and was president of the Society of Cyclists. He was knighted in 1893.—Dr. Luis F. Sass died in New York, November 19th. He was born in Havana, seventy-six years ago, and educated in Paris, and had practised in New York for thirty years. He was the inventor of the Sass apparatus for spraying the throat.—Dr. Philip C. Williams of Baltimore died November 22d, at his home in that city. He was born in Winchester, Va., in 1828. At various times he was president of the Medical and Chirurgical Faculty of Maryland, the Baltimore Medical Association, the Clinical Society of Baltimore, and the Pathological Society of Baltimore.

CORRESPONDENCE.

SECOND PAN-AMERICAN MEDICAL CONGRESS.

Held in the City of Mexico, November 16, 17, 18, and 19, 1896.

[From our Special Correspondent.]

HOTEL DEL JARDIN,
IA CALLE DE LA INDEPENDENCIA,
City of Mexico, November 18, 1896.

As I sit in my room in this curious old convent-hotel this beautiful November day, with the soft southern sunlight streaming in at the wide-open window, and with visions before my eyes of austerely clad nuns, sedately walking between the box-hedges of the quaint old garden, I am mindful of Joaquin Miller's lines to Montezuma's ancient capital:

> This city rests in God's right hand,
> Its sapphire wall is Heaven's wall;
> Where God has done so much for man
> Shall man do naught for man at all?

and the last line is of special significance in connection with the object of my visit—attendance upon the Second Pan-American Medical Congress.

Popocatepetl and Ixtaccihuatl rear their snow-capped summits in sight against the clear tropical sky, and the oddly sounding street cries come faintly to my ears as I train my pen to its duty, vastly preferring as I do to allow my thoughts to wander to the ancient glories of Tenochtitlan, to the valorous deeds of its hero, Cuauhtemoc, the last of the Aztecs, and to the ruin wrought by that prince of adventurers, Cortes; but *duos qui sequitur lepores, neutrum capit*, and I therefore take warning.

The first instalment of delegates arrived on Friday evening last, and was immediately taken possession of by a committee, the members of which extended a hearty greeting and housed them pleasantly and comfortably in quarters previously provided. The wants of the ladies in the party were looked after by a special committee of ladies, and every effort was made to emphasize the sincerity of the welcome. Others arrived during the two following days, and until the opening of the Congress the time was delightfully spent in sight-seeing. Parties were organized to visit the Castle of Chapultepec, the Monte de Piedad, the famed Shrine of Our Lady of Guadalupe, the Floating Gardens, the Cathedral, and the National Museum, while on Sunday, at noon, everybody by common consent went to watch and criticize the promenaders in the famed Alameda.

Many of the delegates drove out to San Cosme, Calzade San Rafael, to inspect the American Hospital, founded in 1886 by the American Benevolent Society, with which Dr. W. Mallet-Prevost was so prominently connected. Dr. Prevost was graduated from the medical department of the University of Pennsylvania with the class of 1887, and was universally beloved by all who came in contact with him. He died from heart-disease two years ago.

The formal opening of the Congress took place at the Teatro Nacional on the evening of Monday, November 16th. This theater, the largest in Mexico, contains five galleries, and accommodates fully three thousand persons, and some idea may be gained of the interest manifested in the proceedings when I say that it was packed to the doors, no inconsiderable portion of the audience being composed of ladies.

The meeting opened with the report of the Secretary-General of the Congress, Dr. Eduardo Licéaga. He dwelt at some length on the successful efforts of Dr. William Pepper of Philadelphia, and Dr. Charles A. L. Reed of Cincinnati, toward the holding of the first Pan-American Congress in Washington in 1893, and of the hearty coöperation of President Diaz and the members of the Mexican Government in the endeavors of the Mexican Medical Society, to make the present meeting a success. He felt that the Mexican members of the Congress had especial cause for self-congratulation at the heartiness with which their invitation had been accepted, as special

delegates were in attendance from several of the States of the United States, and from most of the countries to which the invitation had been extended, including Canada, Guatemala, Nicaragua, San Salvador, Costa Rica, Honduras, Venezuela, Ecuador, Cuba, Uruguay, and Hayti.

In response to a notification sent out earlier in the year by the secretaries of the several committees, he was able to announce that nearly three hundred papers would be read before the different sections of the Congress during the present meeting. The Secretary-General closed his address by extending assurances of a warm welcome to all the visitors whom it was the honor of the President of Mexico and the Mexican medical profession to entertain, and expressed the hope that the happy relations existing between all Pan-American countries would be made stronger, if possible, by the efforts of their representatives joined together in the common cause of humanity.

Dr. Licéaga's remarks were greeted with long-continued and hearty applause, and he was followed by the President of the Congress, Dr. Manuel Carmona of Valle.

Dr. Carmona also referred to the previous Congress, and welcomed the delegates. He then read an exceedingly interesting paper on the history of medicine and of medical education in Mexico from the time of Cortes to the present day. He said that the first chair of medicine at the University was established in 1578, one professor teaching all of the branches, the course lasting four years. From this time on the advance was very gradual, and it was not until 1768 that the Royal College of Surgeons, with four chairs, was created, and dentists, bone-setters, blood-letters, and midwives graduated. After many vicissitudes, owing to political changes in the country, the name of the medical school, in 1842, was changed to "The National School of Medicine," and in 1854 was transferred to the old Inquisition Building in the Plaza de Santo Domingo, where it still remains. At present there are thirty-six professors connected with the school, and the average attendance of students is over three hundred. The school has a library of three thousand volumes, a fine amphitheater, cabinets of natural science and chemistry, and an observatory, and is in a very flourishing condition. The requirements for admission to the school are especially strict, as no matriculant is accepted who does not possess the degree of bachelor of philosophy. The course embraces a period of five years.

Dr. Carmona then spoke of the advances that have been made during recent years in bacteriological methods, and insisted that a new classification of disease was necessary, hoping that a distinct advance in this respect might result from the present meeting. He also referred to the frequent performance of unjustifiable surgical operations, and to the constantly increasing habit of prescribing proprietary medicines.

The next address was delivered by Dr. William Pepper, who was President of the First Pan-American Medical Congress, held in Washington. He spoke in most complimentary terms of the position Mexico has gained for herself in the van of medical progress, and expressed the hope that frequent medical reunions would take place in the future between the representatives of the two countries. He referred to the discoveries of Pasteur, of Behring, and of Kitasato along bacteriological lines, and paid a warm tribute to the discoverer of the Röntgen rays, in the latter connection relating the result of some experiments recently conducted with a specially designed tube, whereby he had been enabled to see distinctly the pulsation of the human heart.

Señor Don José Gamboa then read a paper on "International Sanitary Legislation," passing in review many interesting historical facts, and ending with a suggestion to establish permanent committees in each of the capitals of the Pan-American States, to deal with all questions of quarantine and hygiene. He believed that this would make possible the adoption by all the States of uniform laws governing sanitation.

Much interest had been manifested by all the northern delegates in the personality of General Porfirio Diaz, the President, or dictator, of the Mexican Republic, and when he stepped forward to close the evening's session, he was greeted with long-continued cheers. He spoke briefly in welcome of the visiting physicians and their wives, and stated that he had every reason to hope that the results of the Congress would confer lasting benefits upon the people of the New World.

Several receptions in honor of the visitors had been arranged for the evening, and at the conclusion of the meeting these were very generally enjoyed. The Jockey Club, that most aristocratic of Mexican organizations, which is housed in the grand Casa de los Azulejos, in the Avenida Oriente 4, the Casino Nacional, and the Anglo-American Club were each and all thrown open in the most truly hospitable fashion. Pulque, mescal, and tequila, those curious products of the century-plant, and aguardiente (sugar-cane brandy) were sampled by the curious, and the vinous products of other lands, too, were not neglected.

Tuesday, the second day of the Congress, opened with the reading of a paper by Dr. Juan Santos Fernandez of Havana, on "Yellow Fever as an Obstacle to Civilization." He claimed that to the prevalence of this disease was attributable the fact that the Spanish-American countries had been backward in development as compared with the United States. Immigration from European countries had been greatly restricted on this account, and it had been thought up to the present time that there was no remedy. He insisted that by enforcing strict isolation upon those attacked by the scourge, the disease could be effectually stamped out. He had great faith in the series of experiments that were being made with a view to conferring immunity from the disease, and trusted that before many months the desired goal would be reached.

Dr. E. P. La Chapelle of Montreal next addressed the meeting on "The Subject of Bacteriology, Hygiene, and Medicine." He paid a deserved tribute to the labors of Pasteur, and said that hygiene was but the perfected prophylaxis aimed at in all of the scientist's researches. It had now reached the plane of an exact science, and was founded upon the principles of disinfection and isolation. Upon it is based the theory and practice of modern medicine. The speaker referred to the mortality of child-

hood as influenced by proper hygiene of the alimentary canal, and to the carriage of the germs of typhoid fever and of cholera by water, which could easily be prevented by the employment of hygienic precautions. The careful study of this branch of medicine was becoming universal, and he hoped that the laity would soon arrive at the point where a complete understanding of its importance would render the enforcement of sanitary laws an easy matter.

(To be continued.)

SOCIETY PROCEEDINGS.

NEW YORK ACADEMY OF MEDICINE—SECTION ON PEDIATRICS.

Stated Meeting November 12, 1896.

WALTER LESTER CARR, M.D., Chairman.

LE ROY W. HUBBARD, M.D., exhibited a case of

CLUBFOOT, WITH ABSENCE OF TOES AND FINGERS, AND WITH CONSTRICTION-BANDS OF LEG AND FINGER,

and stated his belief that the sulcus around the right leg had the same origin as the other formations—*i. e.*, from pressure of an amniotic band.

THE CHAIRMAN remarked that it was not usual for the membranes to produce a linear constriction.

J. P. WEST, M.D., of Belair, Ohio, read a paper on

AN EPIDEMIC OF GLANDULAR FEVER,

which had occurred in his vicinity. Altogether, ninety-six cases had occurred in forty-three different families. None of the cases had developed during the summer months. The youngest child who contracted the disease was seven months old, and the oldest, thirteen years. The disease usually lasted a little over two weeks, but the active symptoms subsided for the most part after the first week. As the illness commonly terminated by a critical discharge, calomel was given in a few instances with the hope of hastening the crisis. This, however, proved a disappointment, for not only was the crisis not hastened, but the calomel produced marked prostration. In eighty-seven of the cases the liver was enlarged, and in fifty-three, there was enlargement of the spleen. The older children complained of choking sensations. The glandular swelling appeared smooth on inspection, but palpation would reveal the individual glands. As a rule, the enlargement began on the left side, and subsequently involved the right side. The period of incubation was apparently about a week. During this epidemic no cases of mumps occurred, and fifty-seven of the children had mumps either previously or subsequent to the epidemic of glandular fever. Apparently the source of the poison in glandular fever was not always the same.

DR. AUGUST SEIBERT said that he had seen about twenty-four cases during the past five years, only one of which had proved fatal. In this case, shortly after the right side had become involved in the swelling, the child became cyanotic, and died, evidently as a result of compression of the pneumogastric nerve. In one case, to which the speaker referred somewhat in detail, a diagnosis of meningitis had been made before he had seen the child, because of the opisthotonos, headache, and fever. In this case, there was an evening rise of temperature to 104° or over for nearly four weeks, and the temperature was not in the least controlled by the administration of quinin. As there was also a splenic enlargement, malaria could be fairly excluded. In making the diagnosis, it should be born in mind that there is no sore throat or tonsillitis; that the disease is usually unilateral at first, and that there is never any edema of the surrounding tissue, or suppuration of the lymphatic glands.

DR. HENRY KOPLIK said that although he had seen a large number of cases of lymphatic enlargement, he had never met with a case which seemed to him to answer the description of glandular fever, as originally given by Pfeiffer. The term was a vague one, and was not especially descriptive, although, perhaps, no better term could be offered in the present state of our knowledge. He was inclined to think that the infection of the lymph-nodes had its origin in the gut, and the absence of suppuration would indicate that it was not pyemic.

DR. FLOYD M. CRANDALL said that while glandular fever was certainly not of common occurrence, the description of it left little doubt of its title to be considered as an independent disease.

DR. ROWLAND G. FREEMAN said that the name "glandular fever" seemed to him particularly unfortunate, since it was the lymph-nodes that were involved.

J. LEWIS SMITH, M.D., read a paper[1] on

THE MODE OF EXAMINING SICK CHILDREN SO AS TO PROMOTE GREATER ACCURACY IN DIAGNOSIS.

DR. JOSEPH E. WINTERS said that success in the diagnosis of children's diseases depended not so much on skill, as upon the time, patience, and care bestowed by the physician on these cases. In his opinion it was not more difficult to make a diagnosis in children than in adults, because in the former we listen to the voice of nature rather than to the deceptive descriptions given by adults of the subjective phenomena. The less attention given to these subjective phenomena, and the more to the objective signs, the more accurate would be the diagnosis. The necessity of giving plenty of time to the examination of sick children had been well illustrated by Dr. Smith in his description of the sudden changes in temperature that sometimes followed slight emotion. It was a common, yet very reprehensible, practice, rashly to prescribe the new antipyretics for these cases of ephemeral fever in children. A few years ago he believed more deaths had been caused from the needless use of such drugs than from the pneumonias in which they were given.

DR. CRANDALL divided the children met with in practice into three classes, *viz.*: (1) the good children; (2) the timid children, and (3) the ugly children. It was easy to make the diagnosis in the good children, except among some of the older ones, who rather enjoyed the examination, and who were apt to mislead the physician if he happened to be so indiscreet as to ask leading questions. It would require much tact and patience to

[1] This will appear in an early number of the MEDICAL NEWS.

get along with the timid children. The children of the third class could be more easily managed by a quick and firm manner, than by wasting time in humoring them, only in the end to find it necessary to control them with a firm hand. As it was often impossible to make the examination when the child was quiet, it was essential that the physician should train himself to make his diagnosis even though the child was crying. It should be made a rule of practice to examine carefully not only the throat, but the whole body-surface. Those who believed that children were free from the deceitful practices of their elders would be led into serious error by some nervous and hysterical children.

DR. LOUIS FISCHER thought it should be an easy matter to differentiate between malaria and typhoid fever in children by examining the blood for the plasmodium of malaria. He thought more skill was required in examining a child than an adult.

DR. J. MILTON MABBOTT said that in view of what had been said about elevation of temperature being produced by fright, it would be well in some instances where a physician was called in to see a very nervous child, to make two or three visits of short duration rather than one prolonged visit.

DR. WILLIAM L. STOWELL recommended that in examining the throat of a refractory child, the physician should grasp the child by the back of the neck, and steady the head between this hand and the one holding the tongue-depressor. In collecting the urine of children for examination, the best plan was to use a very small silver catheter; for squeezing the urine out of the diaper or out of a sponge was entirely too crude a method.

THE CHAIRMAN emphasized the fact that many sudden and sharp fevers, as well as apparently urgent symptoms in children were often due solely to derangement of the alimentary tract.

DR. SMITH, in closing the discussion, said that he would suggest that in cases of diphtheria the physician should stand behind his patient while examining the throat, as in this way there was no chance of some of the secretions being coughed into his face. A neglect of this precaution in one instance that had come under his notice had resulted in the physician carrying home diphtheritic membrane on his beard, and giving the disease in a fatal form to one of his own children.

SOUTHERN SURGICAL AND GYNECOLOGICAL ASSOCIATION.

The Ninth Annual Meeting, held in Nashville, Tenn., November 10, 11, and 12, 1896.

(Concluded.)

FIRST DAY—AFTERNOON SESSION.

JOHN T. WILSON, M.D., of Sherman, Tex., read a paper entitled

MENTAL COMPLICATIONS FOLLOWING SURGICAL OPERATIONS.

While surgical operations are sometimes the cause of serious mental disturbance, they sometimes cure these disturbances, especially is this the case with some melancholiacs. The question may very properly be asked, why should a surgical operation produce an attack of insanity? This can no more be answered in every case, satisfactorily, than can the question, why some persons become insane from the many other causes to which it is attributed, for in most cases these mental complications are a surprise, and no good reason can be given why they should follow. In others, however, a logical explanation might be had. If the patient is a high-strung, nervous individual, easily excited, unable to bear pain, the great and increasing dread of the anesthetic, the operation, or both, will so affect him that he will lose control of the will-power. In many of these cases, probably a majority, there is an hereditary taint or a strong neurotic tendency.

The author quoted Mairet, who thinks (1) that it is in those individuals who are predisposed by heredity or other grave causes—alcoholism, infectious diseases, etc.—that surgical operations give rise to insanity. (2) In the constituent elements of an operation that might act on the brain were two most important ones, namely, the anesthetic and the degree of surgical traumatism, with its after-effects, of which disturbed nutrition plays a very important part. (3) When predisposition, also, is considerable, the anesthetic alone may produce insanity, or it may result even after minor operations. It is, of course, necessary to take into consideration the mental state of the patient prior to the operation, especially in those graver ones where questions of life or death are frequently involved.

DR. E. S. LEWIS of New Orleans related the case of a woman, forty years of age, very hysterical, upon whom he had operated for laceration of the perineum. During convalescence the hysterical manifestations increased, and were associated with delusions. She was transferred to an insane asylum, and after a thorough examination by the physician in charge, an unfavorable prognosis was given. The family history showed traces of insanity.

In another case, a woman sixty years of age, he removed a very large adherent ovarian tumor. The operation was attended with considerable shock. For a few days subsequently the patient did well; had no fever during convalescence, but she later became perfectly insane. He had also seen after operations cases of temporary insanity which had passed off in a few months.

DR. W. E. PARKER of New Orleans had seen two or three cases of insanity following surgical operations, but had never been able to trace any history of insanity in the family. The insanity occurred in alcoholic cases. Two of the men either took morphin or cocain. In the management of such cases the particular drug, to which the patient was addicted, should still be continued in very small doses, being cut off gradually, not suddenly, as great prostration often follows the interdiction of a habit that has continued for a number of years.

DR. R. B. RHETT of Charleston, S. C., had met with two cases of mental aberration which followed the removal of the breast for cancer. A third case occurred in a young woman who had had puerperal insanity prior to operation. In two instances the insanity lasted for three days, in the other three weeks.

DR. A. M. CARTLEDGE of Louisville had only encountered what he considers pure post-operative insanity in two cases. One patient who had been in an insane asylum four years had developed a pus-tube. Just before operation the patient seemed perfectly rational, but on the third day thereafter a violent mania developed, which terminated fatally. The other case of insanity occurred in an unmarried woman, thirty-eight years old, from whom he had removed an ovarian cyst.

DR. JOHN D. S. DAVIS had encountered four cases. In one case—a young man—there was no history of insanity, but an analysis of the urine showed a great many casts and a slight trace of albumin before operation. Operative interference was followed by acute mania, which lasted seven days, and the patient recovered.

DR. JOSEPH TABOR JOHNSTON said that, in talking with Drs. Kelly and Noble, he learned that the latter had seen eight cases of insanity following perineal operations.

DR. WILSON had seen a number of cases of various forms of insanity following surgical operation, but does not think the disease occurs more frequently after operations upon the perineum and genitalia than any other part of the body. He does not think the physician is any more responsible for the death of a patient from insanity following an operation than he is for death following any other operation. He had never heard of a suit for malpractice being brought against a practitioner for a case of mental derangement from a surgical operation.

GEORGE BEN JOHNSTON, M.D., of Richmond, Va., followed with a paper on

SPLITTING THE CAPSULE FOR THE RELIEF OF NEPHRALGIA.

He drew the following conclusions:

(1) Nephralgia is not always associated with a demonstrable lesion. (2) When other evidences of kidney-disease are wanting, the pain is due to too tight a capsule. (3) Nephralgia may, and frequently does, simulate symptoms of gross tissue-changes or mechanical irritants. (4) Where severe and persistent pain in the kidney exists without other evidences of renal disease, exploratory operation is indicated. (5) When inspection, palpation, and needle-puncture fail to disclose a condition sufficient to account for the pain, the capsule should be freely opened.

J. WESLEY BOVEE, M.D., of Washington, D. C., read a paper on

URETERO-URETERAL ANASTOMOSIS

and reported an interesting case. He drew the following conclusions:

(1) Uretero-ureteral anastomosis is a perfectly feasible procedure. (2) Uretero-ureteral anastomosis, whenever possible, is far preferable to any other form of ureteral grafting, to nephrectomy, and to ligation of the ureter. (3) It should be done preferably by lateral implantation or by oblique end-to-end anastomosis, though the transverse end-to-end, or the end-in-end methods may be safely employed. (4) That constrictions of the caliber of the ureter do not usually follow attempts at suturing in closure of complete transverse section of the duct. (5) That nephrectomy for transverse injuries of the ureter *per se* is an unjustifiable operation. (6) That simple ligation of the ureter to produce extinction of the function of the kidney is too uncertain to justify its practice. (7) That drainage is not necessary if the wound be perfectly closed and the tissues throughout are aseptic.

DR. HOWARD A. KELLY said that every abdominal surgeon should be familiar with uretero-cystotomy or uretero-ureteral anastomosis, because in doing abdominal operations the surgeon was liable at any time to injure the ureter, when he would be confronted with the necessity of doing something to repair it. Dr. Kelly then pointed out the various ways in which the ureter might be cut during operations, and described the method he pursues in repairing such injuries.

DR. CHARLES P. NOBLE cited a case of neglected extra-uterine pregnancy complicated with an intraligamentous ovarian tumor. In operating, the intestines were apparently adherent over a mass of blood, and a large fleshy adhesion ran up on it. To save time, this was clamped, cut through, and the pelvis cleaned out. A hysterectomy was also necessary, as the anatomical landmarks were obliterated on both sides of the pelvis and the broad ligaments did not come down in the usual way. When the operation was completed, the patient was in collapse, and it was found that what was supposed to have been a fleshy adhesion was really the ureter and thickened peritoneum. The ureter was cut off almost up to the kidney itself. The lower part of the ureter was taken out with the mass of blood, there being only the upper three or four inches of the ureter left. Had any attempt been made to prolong the operation with the patient in collapse, death would have resulted. Although the ureter was short, it was dragged up into the upper end of the abdominal incision. It was impossible to do a uretero-ureteral anastomosis, or to switch the ureter into the bladder. Dr. Noble removed the kidney, therefore, and the patient recovered.

HENRY D. FRY, M.D., of Washington, D. C., read a paper on

PREGNANCY AND LABOR COMPLICATED BY FIBROID TUMORS OF THE UTERUS.

He advanced two propositions. (1) That the production of abortion is unjustifiable. (2) That labors presenting serious difficulty to delivery are best treated by abdominal section and removal of the child and tumor. This, while saving the life of many infants, will also diminish the maternal mortality.

Dr. A. J. COLEY of Alexander City, Ala., reported a case of cyst on the right side with a left uterine tumor, which was firmly fixed in the pelvis and complicated pregnancy. As pregnancy and labor advanced, the tumor was pushed above the brim of the pelvis, the woman was subsequently delivered naturally of a child, and is now attending to her household affairs. Dr. Coley counsels against operative interference in many of these cases.

DR. R. R. KIME of Atlanta encountered a case some two years ago, in a debilitated patient, with evidence of infection before labor. In introducing the hand a tumor was felt in the posterior uterine segment, crowding the cervix apparently above the symphysis pubis. By

waiting and placing the patient in the exaggerated Sims' position, and elevating the growth, delivery of the child was effected.

DR. HOWARD A. KELLY agreed with the conclusions of the essayist. There was a tendency on the part of the profession to interfere too much in cases of pregnancy complicated by fibroid tumors of the uterus. He had been called in consultation to see a number of such cases, but the indications were not such in some of them as to warrant the induction of premature labor. In many instances a consultation had been the means of postponing operative interference. Fibroid tumors in the upper part of the uterine body, unless large and multiple, were comparatively unimportant. If situated in the lower part of the uterus, as pregnancy advances, they should be pushed up, if possible, in order that labor may proceed naturally. On three occasions he had opened the abdomen, and had done a myomectomy for tumors complicating pregnancy, the woman subsequently going to full term, and being delivered normally.

DR. W. D. HAGGARD, SR., of Nashville mentioned a case of uterine fibroid complicating pregnancy, which came under his observation a few years ago. Hysterectomy was advised by the consultants, but not resorted to. The woman was subsequently delivered of a child, and the tumor six months later had entirely disappeared. Dr. Haggard reported a similar case.

DR. JAMES A. GOGGANS of Alexander City, Ala., had observed, during the last twenty years, a number of cases of pregnancy complicated by uterine tumors. He had seen the case referred to by Dr. Coley. He thinks it is unwise to resort to hysterectomy in a great many cases, believing that the tumors can be pushed up and delivery effected without surgical interference.

DR. JAMES MCFADDEN GASTON cited a case of dermoid tumor which complicated pregnancy. The obstruction was so great that it was utterly impracticable to undertake to deliver the woman by forceps, and it was concluded to lessen the obstruction by aspirating the tumor. This was done, and a little more than one quart of grumous material was drawn off, after which the woman was delivered with forceps of a dead child. Dr. Gaston believes that the woman will have to be subjected to a radical operation for the removal of the dermoid before perfect relief is afforded.

DR. GEORGE A. BAXTER referred to the danger of *post-partum* hemorrhage in cases of fibroids complicating pregnancy. The fibroid tumor interfered with uterine contraction, and consequently rendered it difficult to arrest hemorrhage.

DR. E. S. LEWIS said that during an experience extending over thirty-four years he had never seen a fibroid tumor which justified interference before labor; that is, a fibroid occupying the lower segment of the uterus and impinging upon the pelvic cavity. Within the past year he has delivered two women having large fibroids. In one case when pregnancy supervened, after suspension of menstruation for two months, he was unable for several months to determine the existence of pregnancy. The uterus then reached above the umbilicus, but the woman was pregnant, and was delivered at full term with forceps, and with no extraordinary difficulty. The other woman had an abdominal tumor the size of a six months' fetus. Although she had been married a number of years, she was about forty when she became pregnant. The tumor occupied the upper portion of the body of the uterus, but she was delivered without the use of instruments. He could conceive that, in a case of fibroid situated in the broad ligaments, or occupying the lower segment of the uterus, seriously impinging upon the cavity of the uterus, hysterectomy would be inevitable, but it has been his fortune to escape such cases.

DR. FRY, in closing, was glad to note that the general trend of the discussion was favorable to conservative work in the treatment of pregnancy, complicated by fibroid tumors of the uterus, and of permitting women to go to full term and trying to deliver them naturally. Some of the cases in the paper, which he did not read, exemplified the wonderful resources of nature in overcoming uterine obstructions. *Post-partum* hemorrhage was one of the serious complications of labor under these circumstances, and was common. If the placenta was attached to the fibroid tumor, hemorrhage was free. If it is found necessary to operate, Cæsarean section ought not to be resorted to, as the mortality following such a procedure was as high as eighty-four per cent. The best thing to do is to resort to hysterectomy.

SECOND DAY—MORNING SESSION.

R. R. KIME, M.D., of Atlanta, read a paper entitled

UTERINE DRAINAGE AS A FACTOR IN THE PREVENTION AND RELIEF OF PELVIC INFLAMMATION,

in which he drew the following conclusions:

(1) A uterine tampon is not a true drain, and even obstructs drainage in many cases. (2) Capillary drainage is secured by carrying a strip of gauze up into the uterine cavity, not packing it, and then it drains for a few hours only. (3) Gauze cannot even act as a capillary drain when either end of the center is constricted, or when coated with mucus. (4) Gauze, when saturated with serum, unless it contains an antiseptic, forms a hotbed for germ-development. (5) Never tampon the uterus in puerperal septic infection, except to check hemorrhage. (6) The good effect of a gauze-tampon in cases of endometritis, and after abortion, is not due to drainage, but to its effects as a tampon—*i. e.*, checking hemorrhage, stimulating uterine contractions, prolonging medication of the endometrium, and acting as a surgical dressing. (7) The uterine drainage-tube is the most essential factor in the treatment of puerperal infection, and affords the best method of securing drainage when demanded in other diseased conditions of the uterus. (8) It will save more lives, relieve and prevent more complications, than any other factor at our command.

W. E. PARKER, M.D., of New Orleans read a paper on

GUNSHOT WOUNDS OF THE ABDOMEN,

and reported thirteen cases, with six recoveries. He believed seventy-five per cent. of cases of wounds of the small intestine would recover if the cases were seen early,

the prognosis being better in this class of cases than in any other. He advised an early and rapid operation in all cases.

The diagnosis is generally easy, but when in doubt, he advised enlarging the wound or probing. In doubtful cases, he was inclined to attach much symptomatic importance to pain referred to the umbilicus. He stated that he had never seen a case where this symptom was not present. There is frequently but little shock when grave symptoms are present. Senn's gas-test was not used in any of these cases, and he spoke of it as being unnecessary in at least a majority of cases, uncertain in the hands of those not skilled in its use, and as making it more difficult to replace the intestines after sewing the wounds.

As to the technic, he said: (1) Unless the wound is well to one side, it is best to make a median incision, and it should be long enough to enable the operator to make a thorough examination of the abdominal contents. (2) The whole intestinal canal should, as a rule, be examined. (3) All peritoneal wounds should be sutured with silk Lembert sutures. Intestinal wounds should, other things being equal, be sewn in the long axis of the bowel. (4) If the liver is wounded, better results are obtained from packing than from suturing it. (5) If the kidney has been wounded, it is best to suture the peritoneal wound and treat the kidney extraperitoneally, if necessary. Of course, he did not refer to cases where the laceration and hemorrhage are so great that it is necessary to remove the kidney at once. (6) Drainage, except in late cases, is not necessary if all hemorrhage has been stopped. (7) Cases in which the intestines cannot be sutured without great risk of obstruction should be resected. (8) While enough time should be taken to do the work thoroughly, no time should be wasted. (9) Unless the bullet can be felt, search should not be made for it, as it causes unnecessary delay. (10) The superficial wound should be closed with silkworm-gut or silver wire, and the author believes that a single suture should include the skin, abdominal walls, and peritoneum.

Prognosis.—(1) The sooner the patient is operated upon the better the prognosis. (2) Those cases that have been reported in a series including all cases have shown a mortality of about sixty-two per cent. The prognosis is best in cases of wounds of the small intestine, and he believes that seventy-five per cent. of the cases will recover if seen early. By early, he means in the first two or three hours. (3) We all know that alcoholics stand all surgical work badly, and yet most of these patients have been drinking before they come under our care. The prognosis in non-alcoholics would be better than in alcoholics. (4) If the stomach and intestines are empty, the prognosis is usually improved.

After-treatment.—While not favoring drugging these patients, strychnin and other stimulants should be given hypodermically, if necessary. Especially should strychnia and alcohol in some form be given to alcoholics. Much depends on starting these patients well. If restless after the operation, or suffering, small doses of morphin should be given. If the stomach is quiet, and has not been injured, small amounts of water and Ducro's elixir can safely be given at the end of twenty-four hours, together with small quantities of milk, or some light broth. If the stomach has been injured, the feeding should be per rectum. The diet should be liquid for at least two weeks. If there is shock, with the clammy sweat that is sometimes seen, atropin, gr. $\frac{1}{60}$, should be given every three hours, as may be necessary. When shall we give a purgative? This is one of the most important questions that we shall be called upon to decide. If we give a purgative too soon the stitches may pull out, and if we wait, adhesions may form and give us trouble. The bowels of these patients will usually act spontaneously about the end of the fifth or beginning of the sixth day. If they do not, a mild purgative, assisted by an enema, should be given at the end of the sixth day, or on the morning of the seventh. As a rule, these patients should be kept in bed for at least two and a half weeks.

DR. JAMES MCFADDEN GASTON is very positive in his conviction of the propriety of laparotomy after gunshot wounds of the abdomen, and the sooner the better.

DR. N. P. DANDRIDGE of Cincinnati said that in gunshot wounds an exploration should be made in every case where there is reasonable supposition that the abdominal cavity has been entered. Gunshot wounds were much more serious than stab wounds. He had never succeeded in saving a case of gunshot wound of the intestine.

DR. A. M. CARTLEDGE had operated on five cases of gunshot wounds of the abdomen, three of them hopeless from the beginning, one dying within an hour and a half from a short operation, simply from the enormous amount of blood lost from a wound in the mesenteric vessel. He had never saved a case of gunshot wound with intestinal perforation.

DR. A. V. L. BROKAW of St. Louis considers every case of gunshot wound of the abdomen a law unto itself, and the surgeon has to meet the emergency as it occurs. He agrees with the essayist that a quick operation is absolutely necessary.

DR. W. E. B. DAVIS emphasized the importance of early operation, and called attention to the almost hopeless condition that is found if the surgeon operates after twenty-four or forty-eight hours.

DR. B. R. RHETT happened to have had three cases of gunshot wounds of the abdomen during the past year. In one case, a little boy, there were several intestinal perforations. He was operated on, but died within three hours thereafter. Case two died eleven hours after the closure of the perforations. Case three was that of a negro boy who had six perforations, and was operated on. The perforations were closed, and he made a good recovery.

DR. H. M. HUNTER of Union Springs, Ala., laid stress on the importance of early operative interference. He holds that very few patients will recover after twelve hours if not operated on, no matter how expert the surgeon may be. He had operated on a man, thirty-six hours after the receipt of the injury, who had two perforations of the colon, the ileum being just touched. The man died in three or four hours thereafter of general peritonitis.

DR. JOHN D. S. DAVIS does not believe it is possible to obtain seventy-five per cent. of recoveries from early

operations in injuries of the small intestine in private practice. The cases saved by Dr. Parker were operated on two hours after they were shot, hence early operation was the key-note to success. While he was not prepared to agree fully with Dr. Hunter that none of the cases could be saved after twelve hours, still the majority of them would die, if not operated on, within twelve hours. The most serious injuries to the belly from gunshot wounds were seldom followed by symptoms. There may be several intestinal perforations without the manifestation of any symptoms.

DR. F. W. MCREA had seen and known of several cases of penetrating wounds of the abdomen in Atlanta, all of which had terminated fatally, with one exception, and this patient was operated on by the late Dr. Armstrong. There were several perforations. A foot and a half of the small intestine was resected and the man recovered. The speaker would have some hesitancy in opening the abdomen where there was apt to be some medico-legal complication.

DR. HOWARD A. KELLY offered the following resolution which was unanimously adopted:

RESOLVED, That it is the sense of all the members of the Southern Surgical and Gynecological Association that in gunshot wounds, penetrating the abdominal cavity, the proper routine-procedure is to make an immediate exploratory incision.

DR. PARKER said, in closing, that the late Dr. Miles in his first series of cases reported thirteen cases, the percentage of recovery being nearly forty per cent. He had operated on probably twenty additional cases before his death, and the percentage of recoveries was very much better than in the first series. As to the medico-legal aspects of this subject, all surgeons should advocate the early opening of the abdomen, and if some fellow practitioner should get into trouble as a result of it, the profession should stand together and support him.

L. S. MCMURTRY, M.D., of Louisville read a paper entitled

THE EVOLUTION AND PERFECTION OF THE ASEPTIC SURGICAL TECHNIC.

The author cited cases where surgeons of world-wide reputation had infected their patients through some imperfection in the aseptic surgical technic, and said the subject deserves much more study and attention at the hands of operative surgeons than had heretofore been given to it. So far as instruments, dressings, etc., are concerned, surgeons had an absolute guarantee against sepsis in sterilization by heat; but when it came to the operative field, the hands of the operator and his assistants, they were reduced to mechanical and chemical methods of asepsis, which were certainly far less efficacious and reliable than sterilization by heat.

SECOND DAY—AFTERNOON SESSION.

E. S. LEWIS, M.D., of New Orleans, delivered

THE PRESIDENT'S ADDRESS.

Reference was made to the brilliant achievements of the masters of the art of surgery who had passed away, and of the galaxy of shining lights who had followed and who had created an era in the medical history of this century for all future time. How can we wonder that the "magnificent records obtained by experts have proved alluring temptations to the inexperienced and ambitious," and led to abuses which have left a blot on the fair page of abdominal surgery! As a body representative of the surgeons and gynecologists of the South, it should condemn the reckless and thoughtless plunging in this delicate and difficult work, without knowledge, fitness, or preparation. The statistics of the skilled who had learned to minimize risk and cope with difficulties, should not serve as an argument with the inexperienced to secure subjects. The responsibility of human life should not be ignored in the craving and struggle for notoriety or fame.

Speaking on the relative merits of the abdominal and vaginal operations, he commended the modified vaginal method of Doyen and others, as in touch with the conservative movement of the day, and in marked contrast with the ultraradical operation of Péan.

RICHARD DOUGLAS, M.D., of Nashville read a

MEMORIAL ADDRESS ON DR. PAUL F. EVE.

J. MCFADDEN GASTON, M.D., of Atlanta followed with a paper on

THE RELATIONS OF THE TUBERCULAR DIATHESIS TO ITS LOCAL MANIFESTATIONS.

He said that in considering the various forms in which tuberculosis shows itself in different structures, there must be an underlying element pervading the whole organism, which results from a general deterioration of the secretions. Whether there is a predisposition to the development of tuberculosis in certain parts or organs in advance of any constitutional disease or not, this change occurs in connection with the general impairment of the vital forces which characterizes the tubercular diathesis. While most recent authorities do not make a distinction between scrofula and tuberculosis, there is a fundamental difference in their general and local development. We have different characteristics of tuberculosis when it involves separate organs and structures of the body in a distinctly circumscribed form, or is defined as miliary tubercle in different structures, and yet the dyscrasia which marks the lymphatics under the designation of scrofula differs materially from any of the varieties of tuberculosis heretofore recognized. The presence of a condition recognized as a tubercular diathesis corresponds in some respects with the cachexia of carcinomatous tumors, and is held by many to be hereditary. It is fair to conclude that great caution should be observed in putting restraints upon the marriage of those suffering with pulmonary consumption, and the association of those laboring under this disease should be limited as far as practicable. Finally, the predisposition to tuberculosis cannot be relieved by a surgical operation upon the diseased structures, but must be corrected by remedial agencies acting through the absorbent and secretory organs.

SECOND DAY—EVENING SESSION.

A. V. L. BROKAW, M.D., of St. Louis read a paper entitled

THE RATIONAL TREATMENT OF THE DISEASED APPENDIX BY OPERATION.

He said the question had been vigorously discussed, is appendicitis a surgical disease at all times, or only surgical at times? He wished to be put on record as favoring the first proposition. He was aware that some ultraconservative practitioners claimed that the surgeon who advocated the removal of the appendix in every case when diseased, was a dangerous faddist and an extremist. He earnestly advocated early operation as soon as the diagnosis was made. Always operate when there is even a slight chance of saving a life, regardless of damage to statistics. Invariably operation should be insisted upon in the recurrent cases. With the knowledge of this dread disease evolved from the mortuary chambers, and the treacherous clinical course in a considerable percentage of cases, why should the rational treatment of all cases be other than by prompt surgery?

JAMES A. GOGGANS, M.D., of Alexander City, Ala., followed with a

REPORT OF CASES OF APPENDICITIS.

The main point at issue between the physician and the surgeon in the treatment of appendicitis depended much on a perfect diagnosis. This, too, accounted in a measure for their differences of opinion as to where the medical treatment should end, and when the surgical treatment should begin. According to his experience in the management of this affection, there is only one course to pursue, namely, to remove the appendix just as soon as the diagnosis has been made. Usually, before the operation, he gives a few small doses of calomel, followed by a saline purge, to evacuate the bowels. If opium were not given surgical interference might also save the patient.

DR. JOSEPH TABER JOHNSON looks upon appendicitis as a surgical disease, and believes it should be so treated. He deprecates the use of opium and considers it the patient's greatest enemy, in that it masks the symptoms and renders diagnosis exceedingly difficult.

DR. JAMES MCFADDEN GASTON spoke of the importance of making a distinction between cases of foreign bodies in the appendix and those of a catarrhal nature leading to a general inflammatory condition around the caput coli. Until we had inflammatory conditions which led to an exudate around the caput coli, it was difficult to determine definitely the exact condition which existed in supposed appendicitis. He was becoming more and more impressed with the fact that there were cases of appendicitis that were unattended with perforation, and these were curable without operative measures. An illustrative case was cited.

DR. F. W. MCRAE does not believe every case of appendicitis is a surgical one from the outset. A disease which shows so large a percentage of recoveries was not always an operative one. Treves and othef English surgeons had shown that eighty per cent. of cases of appendicitis got well without operation. While demonstrator of anatomy, he examined every appendix which came upon the dissecting-table, and about 33⅓ per cent. showed evidences of previous inflammatory trouble around the appendix. The individuals, most of them convicts, had died of other diseases.

DR. HOWARD A. KELLY favored early operation. He alluded to the difficulty experienced in distinguishing appendicitis from tubal and ovarian disease of the right side, and related a case in point. In a woman with very high temperature and distended belly, he opened the abdomen, and evacuated a quart of pus. He found a gangrenous tube and ovary, as well as a gangrenous appendix. The patient recovered nicely from the immediate effects of the operation, but died on the thirtieth day thereafter from abscess of the liver.

DR. CHARLES P. NOBLE said the safest general rule was to operate as soon as a diagnosis of appendicitis was made.

DR. M. C. MCGANNON of Nashville recalled one case of appendicitis, a boy, in which the temperature rose to 105° F. The patient was delirious. Upon opening the abdomen, the appendix was found to be black but not perforated. It was easily removed, and the boy made a prompt recovery. He believes in many cases that if the physician waits and watches for distinct symptoms before operating, patients will die.

DR. A. J. COLEY had met with six cases of appendicitis, and made a strong argument in favor of early operative interference.

DR. A. M. CARTLEDGE said the more he operates the more he is inclined to believe we should operate on every operable case as soon as the diagnosis has been made. Mistakes were made by waiting and watching for symptoms to manifest themselves. Very few, if any, surgeons could tell when an appendix had been ruptured.

DR. GEORGE BEN JOHNSTON said, for the sake of statistics, operations for appendicitis should be divided into two classes: Those which are performed for recurrent attacks of the disease, and those which are employed for the relief of the severer varieties where perforation has occurred, or is likely to do so, or where pus is present. If the surgeon is to operate upon recurrent cases, it is better for him to do so between the attacks, in order that he may choose his time for operation. While there were cases of the disease that recovered without treatment, the best results were obtained by surgical interference.

DR. N. P. DANDRIDGE finds with increasing experience that he is more and more favorably disposed toward early operation; at the same time, cases present themselves in which he does not advise operative measures. He believes that some of the desperately bad cases were and could be saved by operation.

DR. R. B. RHETT said he had operated twenty times for this disease. He cited some interesting cases, illustrating the importance of early operation.

DR. W. D. HAGGARD, JR., called attention to the method of Gerster to prevent contamination of the peritoneal cavity in opening appendical abscesses that are

not adherent to the abdominal wall, or are not walled off. It consists in introducing thick layers of iodoform-gauze through the abdominal incision, and packing it between the walls of the abdomen and the abscess-sac itself, so that in the subsequent steps of enucleation there is no possibility of soiling the peritoneal cavity.

DR. D. FORD of Augusta, Ga., spoke in favor of early operation, believing that if cases were not operated on, sooner or later perforation would occur, followed by general peritonitis and death.

DR. W. E. B. DAVIS thought there were few cases of appendicitis that gave rise to general peritonitis, in which the surgeon could do any good. Frequently the surgeon was called too late. Even though the family physician recognizes the condition, it was not an easy matter to persuade the patient to be operated on within the first twenty-four hours, and unless these cases were treated surgically within twenty-four or thirty-six hours, very few of them could be saved. All cases of severe attacks of the disease, in which pain is intense, if seen the first day and consent is obtained, should be operated on. In all cases where there is a second attack operative measures should be resorted to.

DR. GEORGE A. BAXTER spoke of obliterating appendicitis, and asked the essayists to give their opinion of it in their closing remarks.

DR. BROKAW replied that obliterating appendicitis was nothing more nor less than the relapsing form of the disease, as a rule, or what had been termed "growling" appendicitis.

DR. GOGGANS said, in closing, that he could not better present his views on early operation than to say that if he had the disease, or peritonitis supervening upon it, he should demand operation. If he was so low that he could not stand a general anesthetic, he would take a local one, and would ask the surgeon to open his abdomen and remove the appendix.

H. M. MUNTER, M.D., of Union Springs, Ala., reported an interesting case of

COMPOUND COMMINUTED FRACTURE OF THE RADIUS AND ULNA, NEAR THE WRIST-JOINT.

He had been unable to find a similar case on record in the literature of fractures. There were three points with regard to this case: (1) That he was unaware of a similar fracture being reported. (2) He had never read nor heard of the method he had described to reduce the fracture of the forearm. (3) He had never seen nor read of such perfect results as were obtained in this case, the wrist having perfect motion; and there is absolutely no interference with supination and pronation.

DR. N. P. DANDRIDGE of Cincinnati reported a case of transperitoneal ligature of the external iliac artery for inguinal aneurism, in which he removed the aneurismal sac.

In the discussion, Dr. W. E. B. Davis also reported a case of ligation of the common iliac for aneurism of the external iliac, which was followed by an excellent result.

The following officers were elected:

President, Dr. George Ben Johnston of Richmond, Va.; secretary, Dr. W. E. B. Davis of Birmingham, Ala.; treasurer, Dr. A. M. Cartledge of Louisville, Ky.

Dr. E. S. Lewis of New Orleans was elected a member of the judicial council, to supply the place of Dr. Hunter McGuire, whose term had expired.

The Association then adjourned, to meet in St. Louis, Mo., the second Tuesday in November, 1897.

REVIEWS.

A MANUAL OF MATERIA MEDICA AND PHARMACOLOGY. Comprising all Organic and Inorganic drugs which are and have been official in the United States Pharmacopœia, together with important Allied Species and Useful Synthetics. For Students of Medicine, Druggists, Pharmacists, and Physicians. By DAVID M. R. CULBRETH, M.D., Professor of Botany, Materia Medica, and Pharmacognosy in the Maryland College of Pharmacy, Baltimore. In one octavo volume of 812 pages, with 445 illustrations. Lea Brothers & Co., Publishers, Philadelphia and New York, 1896.

THIS book is a distinct addition to those already existing in that it sets a high idea of knowledge to students of pharmacy. As our country grows older we are demanding more and more from the rank and file of this profession. We demand not only a working knowledge of drugs, but that clear, complete basis of scientific attainment upon which alone intelligent original work may be founded. This demand has led the author, for many years engaged in teaching, to prepare the book we are discussing.

The manual will be pleasing to the medical profession on account of the absence of any attempt to include more medical knowledge than is necessary to understand toxicology; for, though medicine must include a knowledge of pharmacy, the pharmacist is not concerned with the science of medicine, except in that small portion of it comprised in a limited knowledge of toxicology, and a limited knowledge of therapeutics. The author of this book evidently realizes what layman and even pharmacists sometimes forget, namely, that therapeutics, though the culmination of medical training, comprises in reality not more than one-tenth of the science of medicine, and that a knowledge of pharmacy should not afford a basis for the practice of medicine.

In this book the reader will find a complete though concise description of materia medica, both organic and inorganic, arranged in a convenient form for study or reference. To the pharmacist, the book will immediately commend itself, but we would urge its study upon the physician also. In the separation of medicine from pharmacy, as was found necessary in early days, physicians lost much and are constantly losing more. A familiarity with a good book on materia medica might do much to retrieve that knowledge of the individual properties of drugs in which the physician of former times was so much superior to the younger man of to-day. These older physicians are sometimes criticized for their habit of prescribing elaborate mixtures, and giving many drugs at one time, but these mixtures were devised for the individual case, and each

drug was given with a specific purpose. With this in mind these ancient prescriptions should not be thoughtlessly criticized without realizing the more grave pharmaceutical vice of to-day, found in the habit of using manufactured pills and mixtures. This has brought about a deficiency in the knowledge of the properties of individual drugs on the part of physicians that is hardly credible. A study of Gilbreth's book in the place of the therapeutic catalogs of manufacturing druggists would do much to remedy this evil. A return to the general use of carefully written and skilfully compounded prescriptions would be a happy reaction from the abuse of ready-made tablets, pills, and proprietary mixtures. Such a reaction can only follow from a better knowledge of drugs by physicians, and a confidence on their part that the pharmacists are maintaining a high ideal of scientific work.

We can conscientiously recommend this book, not only for its contents, but also for the convenience of its arrangement and the elegance of its typography and general make-up.

THE STUDENT'S MEDICAL DICTIONARY. Including all the words and phrases generally used in medicine, with their proper pronunciation and definitions, based on recent medical literature. By GEORGE M. GOULD, A.M., M.D. Tenth edition, rewritten and enlarged. Philadelphia: P. Blakiston, Son & Co.

IT may be accepted as axiomatic that lexicography more than any other department of bibliopoesy calls for unceasing vigilance to prevent blunders and insure a harmonious whole.

Dr. Gould has on the whole emerged with credit from this ordeal. The definitions are generally marked by terseness, accuracy, and an absence of what the most eminent philologist in the United States has termed the "talkee-talkee" element. It is particularly pleasing to find that words which have recently come into use are so well represented. The vocabulary of biological medicine, however, might well have been fuller, and of words in general use "chromicized," "hematokolpos," "blastomycetic" and "paperaceous" have been searched for in vain. "Syphilography" is given, but "syphilology" and "syphilologist" are not.

The cross-reference department shows a sad lack of supervision. To be specific: For the definition of Eberth's bacillus reference is made to the table of bacteria, and for crab-louse to *Pediculus*, but neither is to be found under the words cited. Seidlitz powder has an impertinent reference to potassium, since the definition of the phrase is to be found under pulvis. Thread-worm (of which the proper definition is any nematode worm) is defined, "see *Oxyuris*," which is defined "a genus of nematodé worms, the pinworms." This is referred for definition to *Oxyuris*. Under worm, thread-worm appears again, this time referred to *Oxyuris* and *Trichocephalus*, the definition under the latter word is "the thread-worms." In the definition of worm, the "class" *Vermes* is spoken of, but there is no such class in modern zoology.

Psorosperm in view of its association with the malarial fevers receives a definition, which is most inadequate, presenting no diagnosticating features from other protozoans. Abrasion is very much more commonly used in medicine for the surface abraded, and should have been so defined rather than "the rubbing-off of the cutaneous or mucous surface by an injury." Anthracemia and anthrax, though synonyms, both receive definitions. A cross-reference from the former to the latter would have sufficed. Eosinophile should have had a nounal definition.

The species of *Saccharomyces* appear under a "Table of Bacteria," though that genus is in no legitimate sense bacterial, being very different morphologically. Tables of statistical matter have no proper place in a dictionary whose province is restricted to the treatment of words as such and word-forms, but they are generally inserted as a concession to publishers.

There is a well-marked freedom from typographical errors, though *Saracosporidia* occurs on page 594 and *Absinthum* on page 663. Specific names appear generally in italics, but not infrequently in roman (see *Bacillus anthracis* on page 63, and bacillus anthracis on page 64), and the anachronism of capitalizing vernacular names of plants is also observable.

The appearance of the page leaves nothing to be desired and is worthy of De Vinne himself.

OFFICIAL LIST OF THE CHANGES OF STATION AND DUTIES OF MEDICAL OFFICERS OF THE U. S. MARINE HOSPITAL SERVICE, FOR THE 16 DAYS ENDED OCTOBER 31, 1896.

PURVIANCE, GEORGE, surgeon, placed on waiting orders from November 5, 1896.—October 27, 1896.

SAWTELLE, H. W., surgeon, detailed to represent Service at Pan-American Congress, to be held in city of Mexico, October 28, 1896.

WHEELER, W. A., surgeon, granted leave of absence for three days, October 16, 1896.

PECKHAM, C. T., passed assistant surgeon, directed to proceed from Port Townsend, Wash., to Detroit, Mich., for duty, October 27, 1896.

GLENNAN, A. H., passed assistant surgeon, granted leave of absence for nine days, from December 23, 1896.

PETTUS, W. J., passed assistant surgeon, to assume temporary command of Service at Norfolk, Va., in addition to his other duties, October 24, 1896.

MAGRUDER, G. M., passed assistant surgeon, detailed as Inspector of Immigrants at Galveston, Tex., October 24, 1896.

WERTENBAKER, C. P., passed assistant surgeon, to proceed from Delaware Breakwater Quarantine to Philadelphia, Pa., for temporary duty, October 16, 1896.

YOUNG, C. B., passed assistant surgeon, leave of absence extended five days, October 16, 1896.

NYDEGGER, J. A., passed assistant surgeon, to proceed from South Atlantic to Brunswick, Ga., Quarantine, for temporary duty for thirty days, October 26, 1896.

NORMAN, SEATON, assistant surgeon, granted leave of absence for five days, October 22, 1896.

PROCHAZKA, EMIL, assistant surgeon, to proceed from Cairo, Ill., to Delaware Breakwater Quarantine, for temporary duty, October 16, 1896.

CUMMING, H. S., assistant surgeon, relieved from duty at Evansville, Ind., and directed to rejoin station on expiration of present leave at New York, N. Y., October 22, 1896.

RESIGNATION.

HAMILTON, JOHN B., surgeon, resignation accepted, to take effect November 13, 1896.—October 16, 1896.